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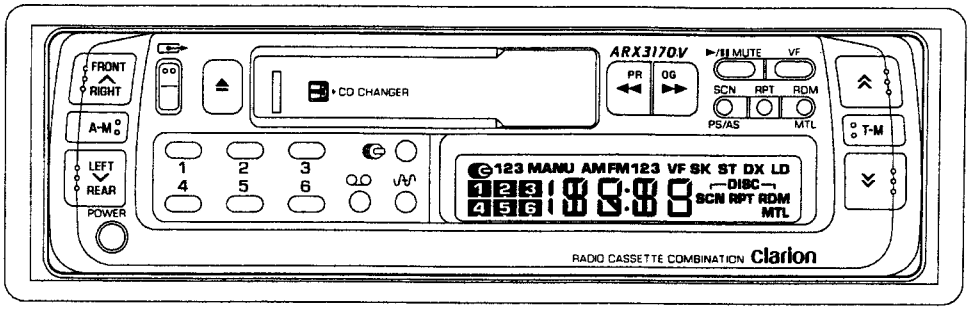
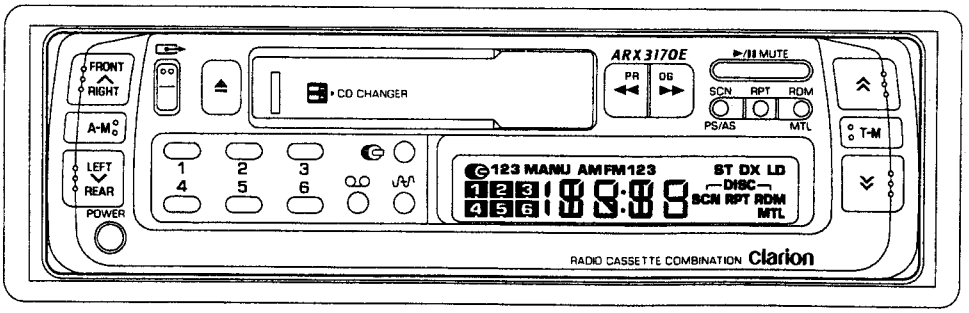
Clarion Service Manual

Published by Service Administration Section



Model ARX3170V (PE-9953E-B)



Model ARX3170E (PE-9952E-C) (PE-9952E-D)

■ SPECIFICATIONS:

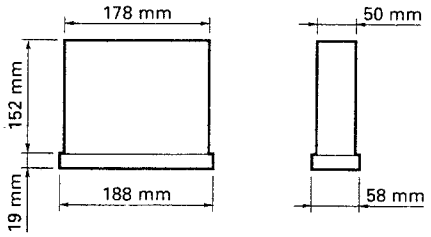
RADIO SECTION
Tuning System: PLL synthesizer tuner
Receiving Frequencies: ..... FM:87.5 to 108 MHz (0.05 MHz steps)
MW:531 to 1,602 kHz (9 kHz steps)
LW:153 to 279 kHz (1 kHz steps)

TAPE DECK SECTION
Playback System: ..... Auto Reversing, 4-track, 2-channel stereo cassette tape playback
Monaural also possible

GENERAL
Power Supply Voltage: ..... DC 14 V (10.8 to 15.6 V allowable), negative ground
Power Consumption: ..... Less than 10 A
Speaker Impedance: ..... 4 (4 to 8 allowable)
Auto Antenna Rated Current: ..... 0.5 A or less

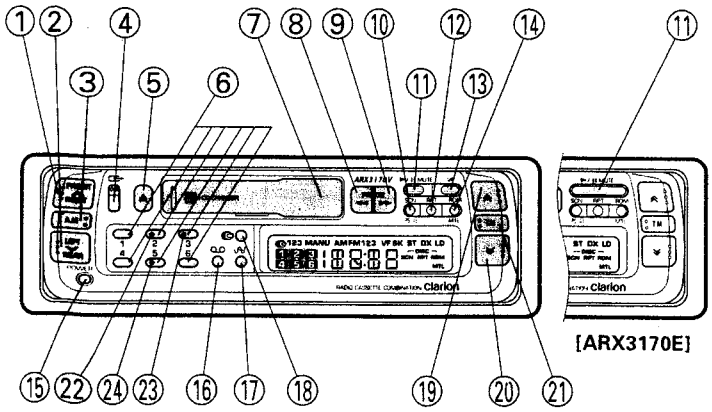
Weight: ..... **1.3 kg**

Dimensions

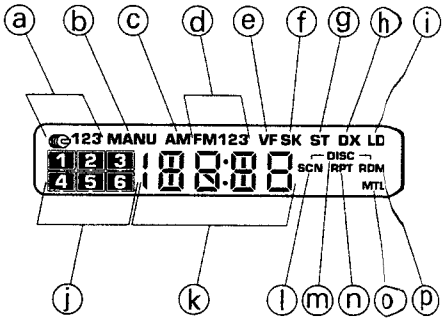


Note:
- Short-circuiting the power antenna terminal or using a power antenna with a curent exceeding the rated current can damage internal circuits. Always use with the rated current.
- Specifications and the design are subject to change without notice for further improvement.

■ OPERATION:



■ DISPLAY



1. Controlling the Sound & General Operation

CAUTION!
Turning the ignition on or turning the POWER button on with the volume control at the maximum position can damage your cars.

✱ **POWER Button** ☛ ⑮
✱ **Audio Mode (A-M)/Loudness Selector Button** ☛ ③
Press the button 3 , to select the adjustment mode. The adjustment mode changes in the following order.

VOL—>BASS—>TREB—>BAL—>FAD—>VOL

- **Loudness ON/OFF**
When you press the button ③ for more than 2 seconds, loudness is turned on, and the "LD" indicator ⓙ lights up. To turn loudness off, press the button again for more than 2 seconds.

✱ **Audio Control Up Button** ☛ ①
✱ **Audio Control Down Button** ☛ ②

■ Audio Mode Indications and Description of Operation

Audio Control Up/Down Buttons / Audio Mode	○ LEFT ○ ∨ ○ REAR	Center Position	○ FRONT ○ ∧ ○ RIGHT
VOL volume adjustment	Vo 0	Vo 13 **Note 3** (initial setting)	Vo33
BASS bass adjustment	BA-7 (negative indication)	BA 0	BA+7
TREB treble adjustment	TR-7 (negative indication)	TR 0	TR+7
BAL left/right balance adjustment	BL 9 (Balance Left)	B 0	BR 9 (Balance Right)
FAD front/rear balance adjustment	FR 9 (Fader Rear)	F 0	FF 9 (Fader Front)

Note 1: In the balance and fader adjustment modes, the actual steps and the steps indicated on the display do not match due to the large number of steps.
Note 2: The original display reappears approximately 7 seconds after the adjustments in the various audio modes.
Note 3: The various modes are set to the following values when the power is first turned on after the set is installed in the car: VOL 13 , BA 0 ,TR 0 , B 0 and F 0.

✱ Setting the DSP Mode
If you have a Digital Sound Processor (DSP) connected to your unit, you must carry out this setting without fail. Turn the volume to MAX (Vo33). Holding down button ③ , press button ㉒ . The adjustments of the volume and tons are carried on the Digital Sound Processor.

✱ Setting the Equalizer Mode
If you have an Equalizer or a Digital Sound Processor with a built-in equalizer connected to your unit, you must carry out this setting without fail. Holding down button ③ , press button ㉓ . The bass/ treble adjustment is carried out on the equalizer.

✱ Monitor
The tape deck continues to operate even if the mode is switched for example to the radio mode while fast-forwarding, rewinding or searching on a tape.

2. Listening to the Radio

✱ Tuner Mode Selection/Band Selection Button ☛ ⑰

- **Tuner Mode Selection**
  Press button ⑰ to set the tuner mode.
- **Band Selection**
  When you press button ⑰ , the reception band changes in the following order:
  FM1—>FM2—>FM3—>AM(L/M)—>FM1
  (FM1, FM2 and FM3 are on the same reception frequency band.)

✱ Tuning Mode Selector Button (T-M) ☛ ㉑
Press the button ㉑ so that **"MANU"** appears on the display. The manual tuning mode is now set. Tune into a station by pressing button ⑲ or button ⑳ . Unless you press button ⑲ or button ⑳ within 7 seconds of switching to the manual tuning mode, the unit will return to the seek tuning mode.

- **Manual Tuning**
  During FM reception, the frequency changes in steps of 0.05 MHz. On MW, it changes in steps of 9 kHz, and on LW, in steps of 1 kHz.
  1. Press the button ㉑ to set the manual tuning mode.
  2. When you press button ⑲ , the frequency increases, and when you press button ⑳ , it decreases.
- **Seek Tuning (Local/DX)**
  There are two sensitivity levels for seek tuning: DX seek, which will tune in any broadcasting stations which can be received, and Local seek, where only those stations with a sufficiently strong signal, i. e. local stations, can be tuned in.
  <DX Seek>
  1. Check that the **"DX"** indicator ⓗ is lit. If not, press button 21 for more than 2 seconds.
  2. Press button ⑲ to tune toward higher frequencies and press button ⑳ to tune toward lower frequencies.
     Tuning will stop when a broadcast station is received.

  <Local Seek>
  1. The **"DX"** indicator ⓗ appears when button ㉑ is pressed for over 2 seconds.
  2. Press button ⑲ to tune toward higher frequencies and press button ⑳ to tune toward lower frequencies.
     Tuning will stop when a broadcast station with a strong signal is received.

✱ MUTE Button ☛ ⑪
When button ⑪ is pressed, the sound turns off and **"MUTE"** appears. Press the button again to cancel the muting mode.

✱ Preset Buttons 1, 2, 3, 4, 5 and 6 ☛ ⑥
By pressing a Preset button you can instantly recall a station which has been stored in memory.
★ When calling a broadcasting station, unless you release the Preset button within 2 seconds, the displayed frequency will be stored at the Preset button, so be careful.

✱ Storing Stations in the Preset Memory
6 radio stations can be stored in memory for each band.
1. Press button ⑰ to select the reception band.
2. Press button ⑩ for more than 2 seconds to store stations automatically in the memory (Auto Store). If less than 6 stations are stored in this process, or if you want to store a broadcasting station with a weak signal, carry out the following steps.
3. Tune in the broadcasting station using Manual Tuning.
4. Press the desired Preset button for more than 2 seconds. The sound will go off when you press the button, and when it comes on again , the station has been stored.

✱ Preset Scan/Auto Store Memory Button ☛ ⑩

- **Preset Scan**
  Press button ⑩ . The broadcasting stations stored at Preset buttons 1 to 6 will be received in order for 7 seconds each.
  When you press button ⑩ again, or press one of the Preset buttons 1 to 6, this mode will be released. (When the unit is receiving on FM, all the stations stored in FM1, FM2 and FM3 will be received in order.)
  ★ If you press button ⑩ for more than 2 seconds, the Auto Store memory mode will become operative. All the stations stored in the memory so far will be cleared, and new ones will be stored instead, so be careful.
- **Auto Store Memory**
  6 strong-signal broadcasting stations can be stored automatically for each band. (See "Storing Stations in the Preset Memory".)
  ★ Stations previously stored in the preset memory are cleared when new ones are stored using Auto Store.

✱ **Stereo Reception Indicator**
When a stereo broadcast is received, the **"ST"** indicator ⑨ lights up.

✱ **Traffic Information Button (VF)** ☛ ⑬ **[ARX3170V Only]**
1. When the **"SK"** indicator ⓕ is lit, this signifies that the station tuned in transmits traffic information broadcasts.
   Using the button ⑬ , you can select automatic reception of Traffic Information broadcasts (**"VF"** indicator ⓔ lit). This means that if a traffic information broadcast is aired while you listen to a cassette or a CD, playback will pause and the announcement can be heard. When the announcement is completed, cassette or CD playback continues. Traffic information announcements are reproduced at a preset volume level and can be heard even if the volume level is set to minimum.
   "INFO" appears on the display during reception of traffic information broadcasts.
2. If the button ⑬ is pressed while a station not broadcasting traffic information is being received, the unit will search for a station broadcasting such information and tune into it if possible.
3. If the **"VF"** indicator ⓔ lights during Seek Tuning or Auto Store, only stations broadcasting Traffic Information will be heard and stored in memory.

✱ **Retuning of Traffic Information Stations (only valid when VF is on)** ☛ ⑬
When the signal from the station broadcasting traffic information becomes too weak, the unit will search for another station broadcasting such information.

✱ **Adjusting the Volume of Traffic Information Announcement** ☛ ① , ② , ⑬
The volume level for traffic information announcements has been preset at the factory. It is possible to change this level if required.
1. Tune in the traffic information station broadcasting the strongest signal you can find.
2. Keep the button ⑬ pressed for 2 seconds. **"VF9"** will be displayed.
3. Use the Up button ① and Down button ② to change the volume level of traffic information announcements. The minimum level is 0 and maximum level 33.
4. Normal operation resumes 7 seconds after the volume is adjusted.

3. Listening to Cassette Tapes

✱ **Cassette Tape Playback**
Insert the cassette tape horizontally so that the side where the tape can be seen is on the right.

✱ **Tape Mode Selector Button** ☛ ⑯
When you press button ⑯ **"TAPE"** is displayed, and tape playback begins. If no cassette tape is loaded, **"CASS"** flashes and the mode returns to the previous mode.

✱ **Play/Pause Button** ☛ ⑪
Each time you press button ⑪ , playback begins or pauses.

✱ **Eject Button** ☛ ⑤
When you press button ⑤ , the cassette tape is ejected. If you eject the tape while it is being played, the tuner mode is set.

✱ **Fast Forward and Rewind/Programme Selector Buttons** ☛ ⑧ , ⑨

- **Using Fast Forward/Rewind**
  1. During top side playback (tape travel indicators light clockwise):
     Fast forward: Press button ⑨ until it locks.
     Rewind: Press button ⑧ until it locks.
  2. During bottom side playback (tape travel indicators light counterclockwise):
     Fast forward: Press button ⑧ until it locks.
     Rewind: Press button ⑨ until it locks.
  3. Release
     Press the opposite button-either ⑧ or ⑨ .
- **Changing the Programme (Running Direction)**
  When you press buttons ⑧ and ⑨ simultaneously, the tape playback direction will change.

✱ **Metal Tape Button** ☛ ⑭
Use this button to select the proper equalization for the type of tape being used.

4. Operating a CD Changer

You can connect a CD changer (sold separately) to this unit to enjoy CD playback.

✱ **CD Changer Mode Selector Button** ☛ ⑱
Press button ⑱ . The disc number ⓙ and track number will appear on the display, and playback will start.

★ If CD playback does not start, the reason will appear on the display. For details, see **"Typical Displays in CD Changer Mode"**.

✱ **Last Position Memory**
Before the power is switched off, and before changing to another mode, this unit stores the setting for the track which was being played last . When playback is resumed, it starts with this track.

★ When the magazine is replaced, the stored setting for the track previously played is erased.

✱ **Play/Pause Button** ☛ ⑪
Each time you press button ⑪ , playback begins or pauses.

✱ **Disc Up Search Button** ☛ ⑱
When you press button ⑱ , the next disc starts playing. Each time you press this button, the unit moves on to the next disc, in order. If 6 discs have not been loaded in the magazine, the empty disc numbers are skipped.

✱ **Magazine Select Button** ☛ ⑱ **Selecting the Magazine**

- **When a 12-disc or 18-disc changer is connected:**
  Press this button for more than two seconds to increase the magazine number one number at a time and begin playback.
  ❇ Playback starts from the first track on disc no. 1.

✱ **Direct Disc Buttons** ☛ ⑥
When you press button ⑥ (1 to 6), the disc corresponding to the button which was pressed is played, If you press the button for the disc number currently playing, the unit will return to the first track on the disc.

✱ **Search Control Up Button** ☛ ⑲ / **Search Control Down Button** ☛ ⑳

- **Track Number Search**
  When you press button ⑲ , the track number goes up, and when you press button ⑳ ,the track number goes down. The track number is shown on the display.
- **Cusing/Reviewing (high-speed playback)**
  Press and hold in button ⑲ to cue, button ⑳ to review.

✱ **Repeat Play Button** ☛ ⑫
The repeat function consists of Track Repeat, which plays one track repeatedly, and Disc Repeat, which plays one disc repeatedly.

- **Track Repeat**
  Press button ⑫ . The **"RPT"** indicator ⓝ lights up, and the track currently playing is played over and over again. When you press the button again, this mode is released.
- **Disc Repeat**
  Press button ⑫ for more than 2 seconds. The **"DISC"** indicator ⓜ and the **"RPT"** indicator ⓝ light up, and the disc currently playing is played over and over again. When you press the button again, this mode is released.

✱ **Scan Button** ☛ ⑩
Press this button to play the first ⑩ seconds CD tracks.
The scan function consists of Track Scan, which plays a bit of each track on the disc, and Disc Scan, which plays a bit of the first track on the disc and then moves on to the next disc.

- **Track Scan**
  Press button ⑩ . The **"SCN"** indicator ⓘ lights up, and track scan begins. When you press the button again, this mode is released and playback continues. When it has finished playing the first bit of the last track, Track Scan moves on to the next disc and continues from there.
- **Disc Scan**
  Press button ⑩ for more than 2 seconds. The **"DISC"** indicator ⓜ and the **"SCN"** indicator ⓘ light up, and Disc Scan begins. When you press the button again, this mode is released and playback continues.

✱ **Random Play Button** ☛ ⑭
The Random Play function consists of normal Random Play, which selects and plays tracks at random from one disc, and Disc Random Play, which selects and plays tracks at random from among all the discs in the magazine.

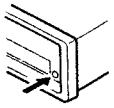
- **Random Play**
  Press button ⑭ . The **"RDM"** indicator ⓟ lights up, and random play begins. When you press this button again, this mode is released. When the unit has finished playing all the tracks on the disc, it moves on to the next disc and starts random play on that disc.
- **Disc Random Play**
  Press button ⑭ for more than 2 seconds. The **"DISC"** indicator ⓜ and **"RDM"** indicator ⓟ light up, and random play of all tracks on all discs begins. When you press the button again, this mode is released.

★ Tracks are selected at random, so the same track may be played more than once.

■ **Typical Displays in CD Changer Mode**

Button No. and Mode of Operation	Display	Explanation of the Display
When mode changes	Loon	Displayed when the CD changer is not connected (wrongly wired, for example)
	DISC	1) Displayed when the magazine is not set in the CD changer 2) Displayed when no CD has been inserted in the magazine

5. Troubleshooting

Problem	Cause	Measure
Power does not turn on (or no sound is produced).	Fuse is blown.	Replace with a fuse of the same amperage (10 A) as the old fuse.
	Connections are improper.	Read the connection instructions once more and connect carefully.
Sound quality is poor.	Playback head is dirty.	Use a cleaning tape, etc. to clean the head.
Nothing happens when buttons are pressed, or display is wrong.	Microprocessor has malfunctioned due to noise, etc.	Use a thin rod, etc. to press the reset button. 

■ **This unit is equipped with a number of self-diagnosis functions to protect the system. If a problem should occur, the user is warned through various error displays. Eliminate the problem using the procedures shown below.**

Error Display	Procedure
1 2 3 4 5 6 HHHH	This indicates that playback has been stopped automatically due to a rise in the temperature inside the CD changer or a rise in the surrounding temperature. → Lower the temperature around the CD changer and wait a while.
1 2 3 4 5 6 ER 2	This indicates that a problem has occurred with the CD changer's mechanism (disc cannot be changed or ejected, etc.). → The CD changer mechanism is likely damaged. Contact your store of purchase.
1 2 3 4 5 6 ER 3	This indicates that the pickup is out of focus during playback due to scratches on the disc, etc.
1 2 3 4 5 6 ER 6	This indicates that the CD's TOC (table of contents) cannot be read, for example because the selected disc is upside-down.

✱ If a display other than one of the displays above apperas, press the reset button. If the problem persists, turn the power off and contact your store of purchase.

■ FEATURES:

TUNER

■ Automatic Traffic Information Station Tuning (VF) [ARX3170V Only] ■ Electronic Quartz-Locked PLL Tuning ■ One-Touch Memory (18 FM, 6 MW/LW) ■ Tuning Modes: Manual Tuning and Station Seek in both directions ■ Preset Scan (PS) & Auto Store (AS) on FM / MW / LW ■ DX / Local Switch ■ Super SASC II (Signal Actuated Stereo Control) & CZ1 Noise Canceller ■ Adjustable DK Level

TAPE SECTION

■ Auto Reverse ■ Electronic Servo Motor ■ Metal(70 µs) Tape Equalization ■ Hard Permalloy Dual-Gutter Head ■ Illuminated Tape Door

AUDIO SECTION

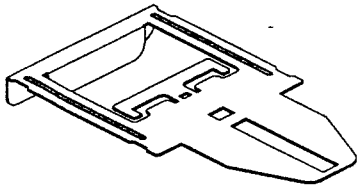
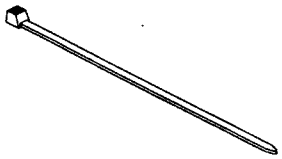
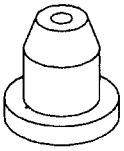
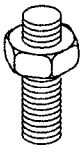
■ Muting, Loudness, Fader, Bass/Treble Controls ■ 2-Channel RCA Line Level Output ■ Maximum Power Output: 4x30 W

GENERAL

■ CD Changer Control ■ Power Antenna Activator ■ Multi-Mode LCD Display ■ Radio/Tape/CD Changer Mode Selectors ■ Fully Detachable Control Panel ■ DIN Chassis ■ Monitor

■ COMPONENT VIEW:

• ARB3170V/E (PE-9953E-B)(PE-9952E-C/D)

MAIN UNIT			
921-9259-00	PART'S BAG		1
			
HOOK PLATE 330-8216-01	LEAD HOLDE 335-0833-01	SPACER 345-3653-01	SPECIAL. SC 716-0726-01

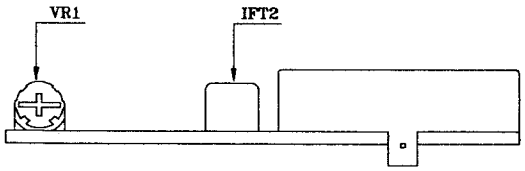
■ ADJUSTMENTS:

• FM Circuit (TUNER PACK)

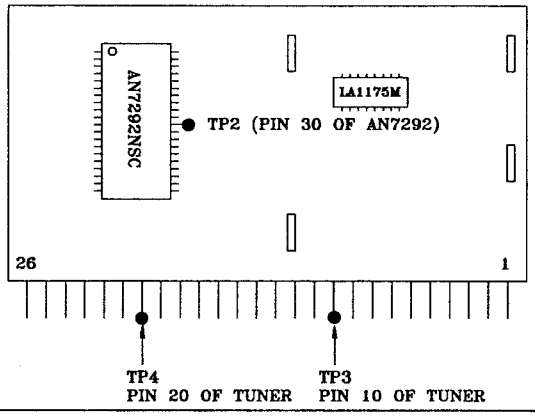
ITEM	TEST-POINT	PROCEDURE
0V	IFT2	1.CONNECT THE DIGITAL VOLT-METER TO TP2 AND TP3. 2.INPUT THE 98.1MHZ/65dB SIGNAL (NO MOD.),AND ADJUST THE READING OF DIGITAL VOLT-METER TO 0±30mV BY IFT2.
S-METER	VR1	1.CONNECT THE DIGITAL VOLT-METER TO TP4. 2.INPUT THE 98.1MHZ/30dB SIGNAL (NO MOD.) 3.ADJUST THE LEVEL TO 2.4±0.1V BY VR1.

ADJUSTMENT POINT/TEST POINT

TOP VIEW



BOTTOM VIEW



• AM Circuit (TUNER PACK)

ITEM	TEST-POINT	PROCEDURE
● IF ● TRACKING	PRE-ADJUSTED TUNER	

• MAIN PWB

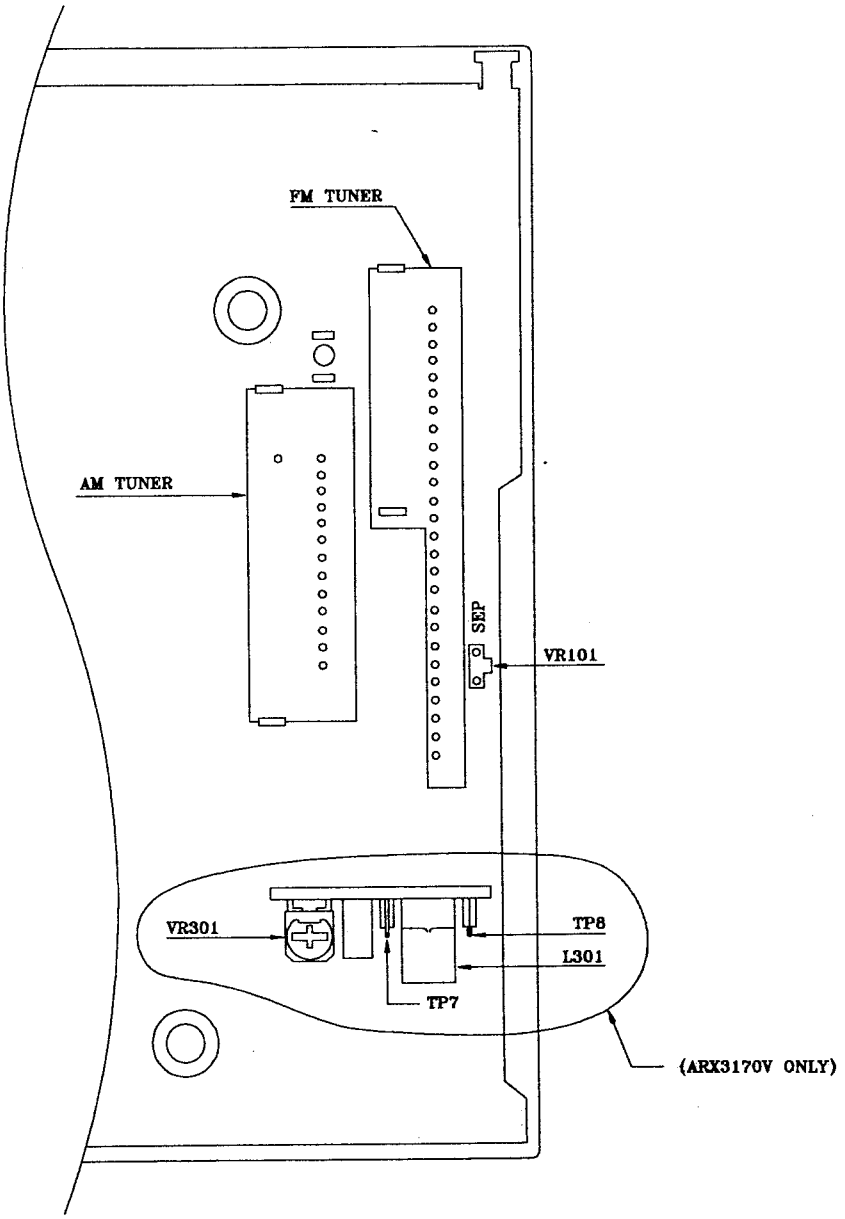
ITEM	TEST-POINT	PROCEDURE
FM SEPARATION	VR101	1.INPUT THE 98.1MHz, CONNECT THE OUTPUT OF A STEREO MODULATOR TO THE EXTERNAL MODULATION TERMINAL, AND INPUT A 65dB SIGNAL. 2.SET THE STEREO MODULATOR TO THE L OR R-ch AND ADJUST VR101 SO THAT THE MAXIMUM SEPARATION IS OBTAINED. (MORE THAN 20dB)

• VF PWB BLOCK

ITEM	TEST-POINT	PROCEDURE
VF-SK (57kHz) (ARX3170V ONLY)	L301	1.CONNECT THE DIGITAL VOLT-METER TO TP7. 2.INPUT THE 98.1MHZ/65dB SIGNAL (NO MOD.) SK+BK=ON, DK=OFF. 3.ADJUST THE READING OF DIGITAL VOLT-METER TO MAXIMUM BY L301.
VF-DK (125Hz) (ARX3170V ONLY)	VR301	1.CONNECT THE DIGITAL VOLT-METER TO TP8. 2.INPUT THE 98.1MHZ/65dB SIGNA MOD. SK+BK+DK=ON 3.ADJUST THE READING OF DIGITAL VOLT-METER TO MAXIMUM BY VR301

ADJUSTMENT POINT/TEST POINT

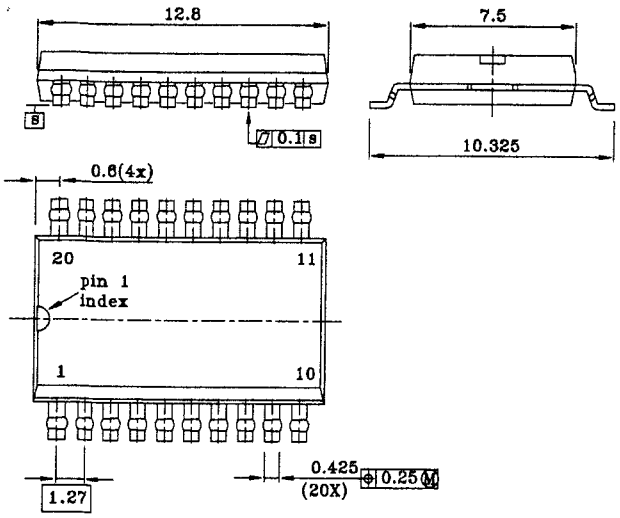
TOP VIEW



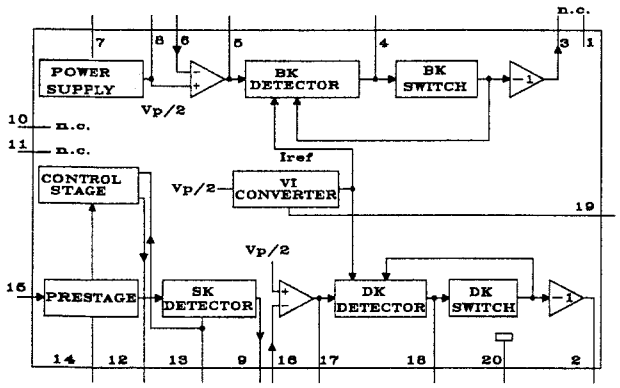
■ EXPLANATION OF IC's:

■ TDA1581T 051-1817-90

Outward Form

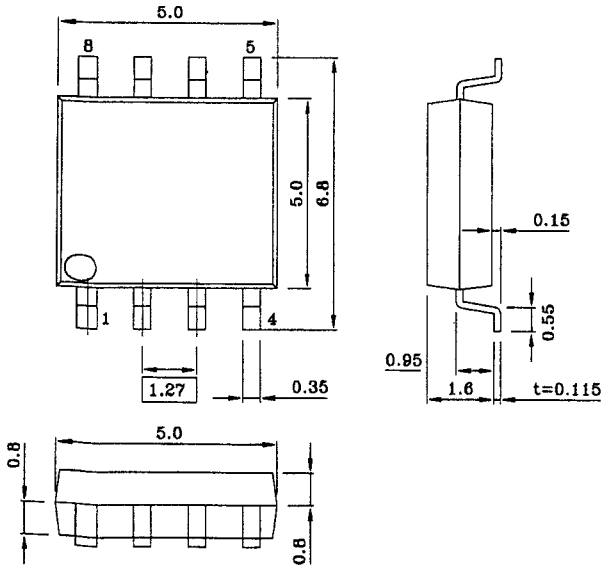


Block Diagram

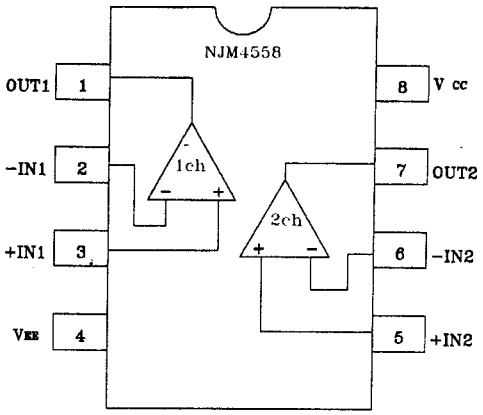


■ NJM4558M 051-0350-55

Outward Form

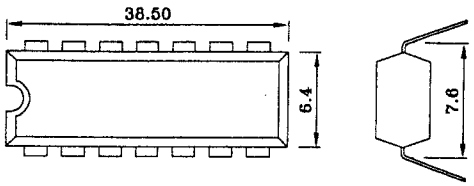


Block Diagram

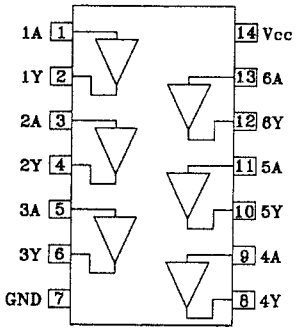


■ HD74LS07P 051-0160-01

Outward Form

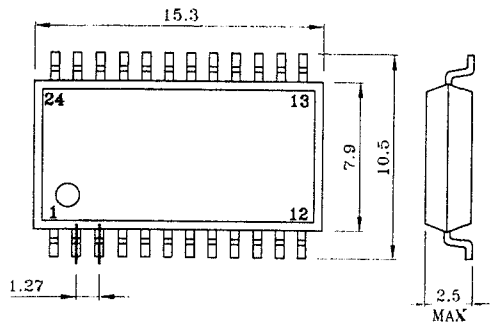


Block Diagram

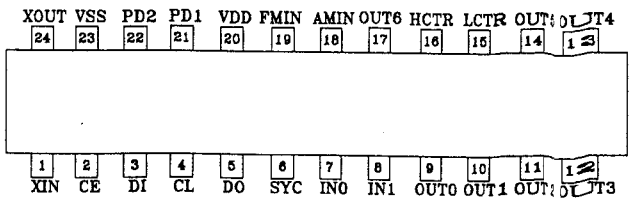


■ LC7219M 051-1717-05

Outward Form



Terminal Connection



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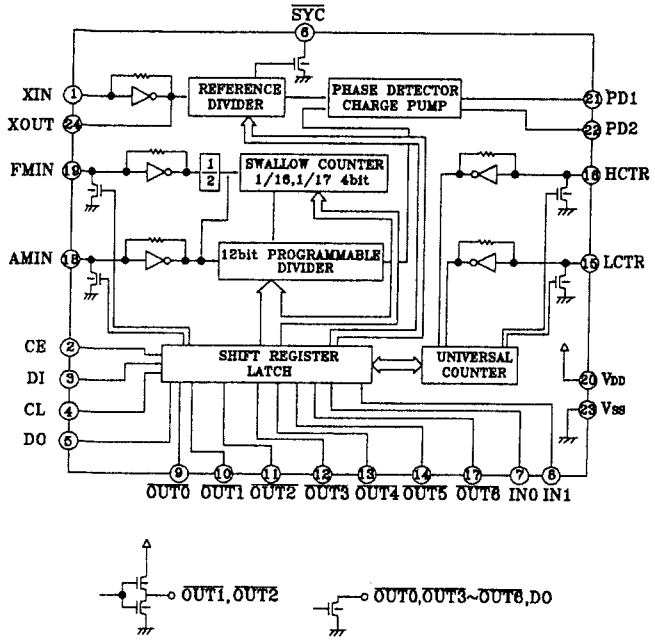
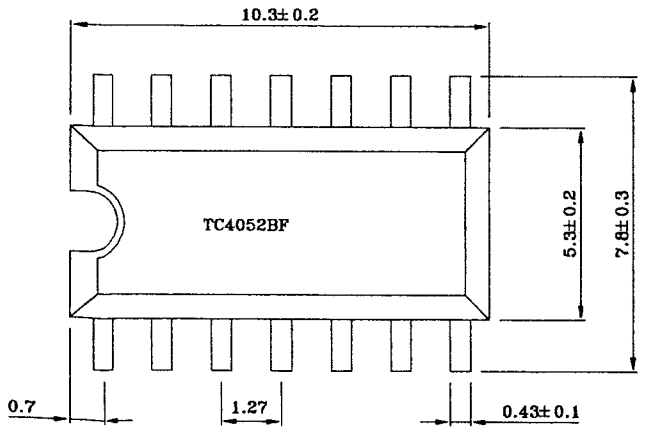
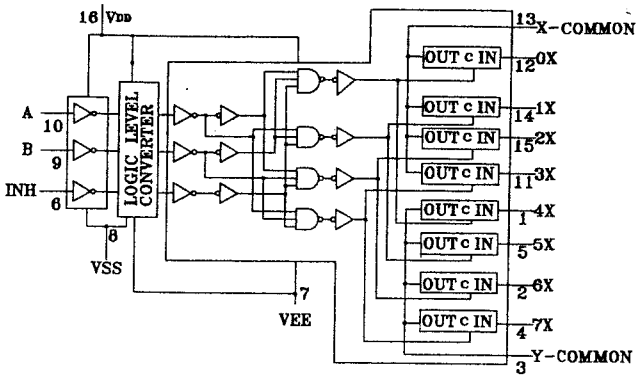


Symbol	Function
XIN.XOUT	X'tal OSC(7.2MH)
FMIN.AMIN	Local oscillation data input
CE. CL. DI. DO	Serial data I/O port
OUT0 OUT6	Output terminal
IN0.IN1	Input terminal
HCTR.LCTR	Counter input
PD1.PD2	Charge pump output
SYC	For controler clock (400kHz)

■ TC4052BF(9959) 051-0410-05
Outward Form

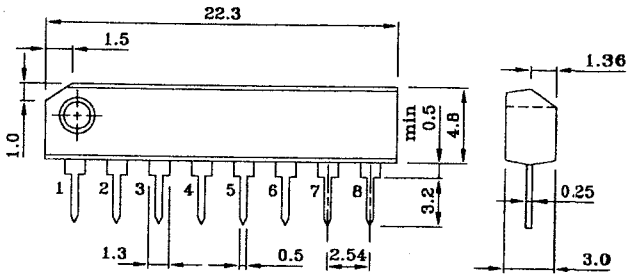


Block Diagram

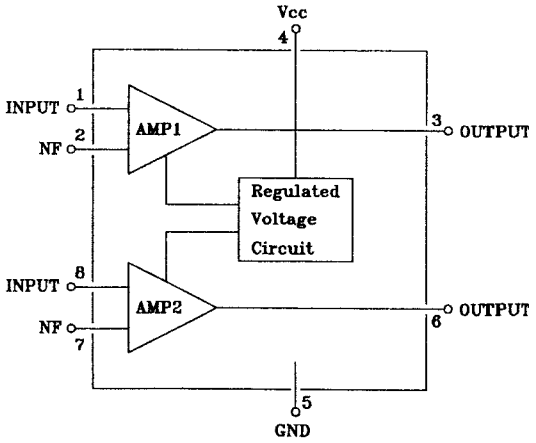


■ LA3161 051-0272-00
Outward Form

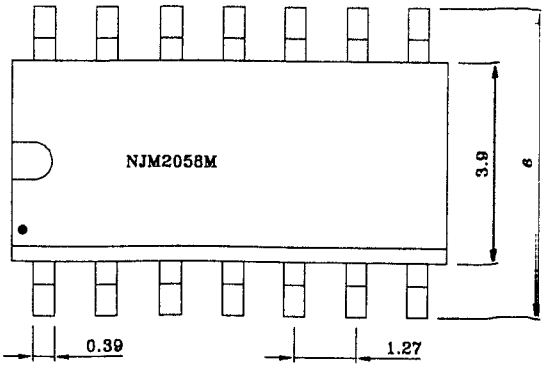
Case Outline 3016B-S8IC
(unit:mm)



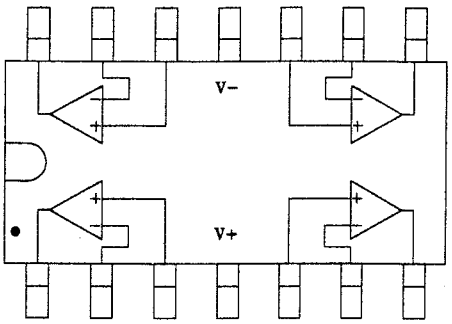
Block Diagram



■ NJM2058M 051-0556-91
Outward Form

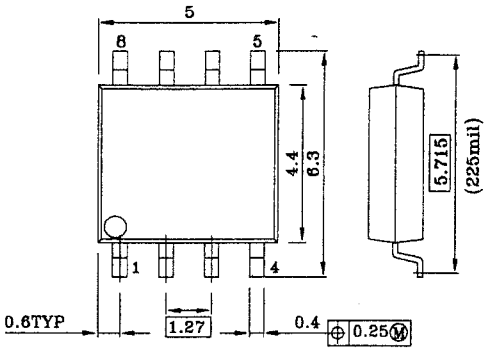


Block Diagram

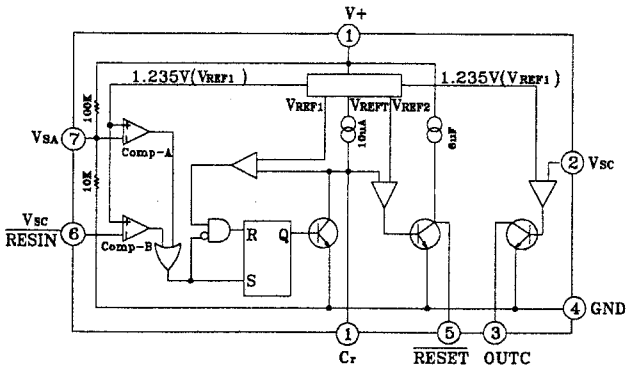


■ NJM2103M 051-0869-55

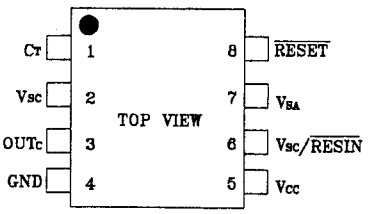
Outward Form



Block Diagram

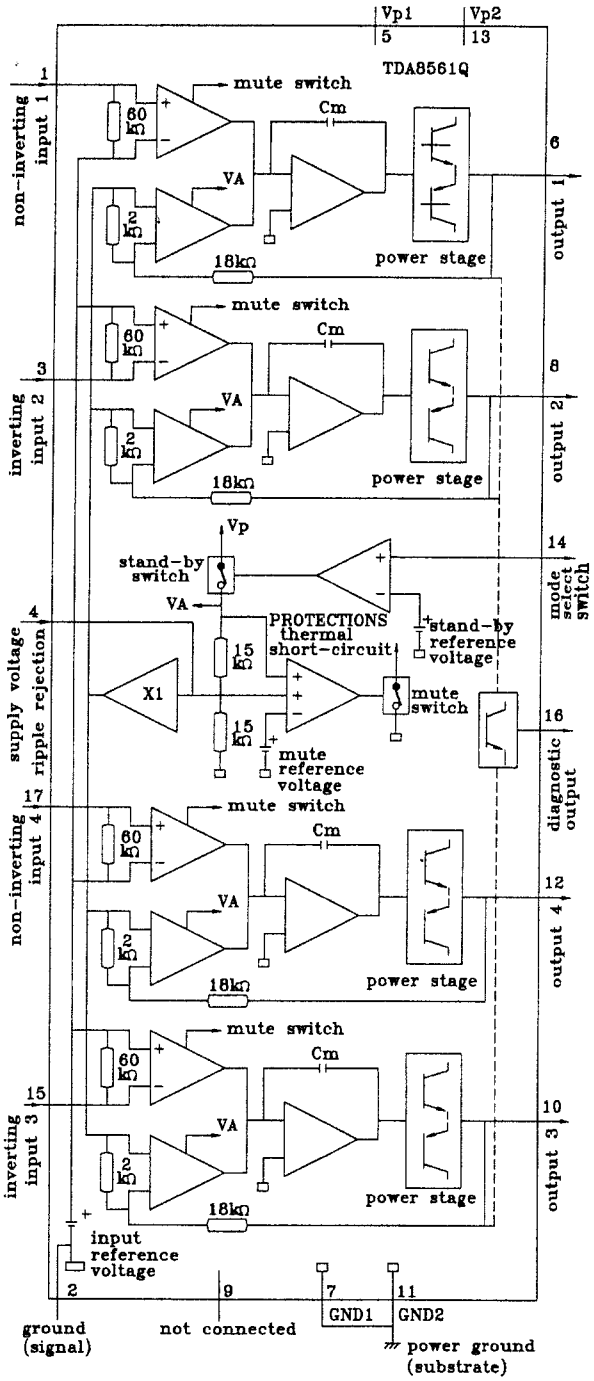


Terminal Connection

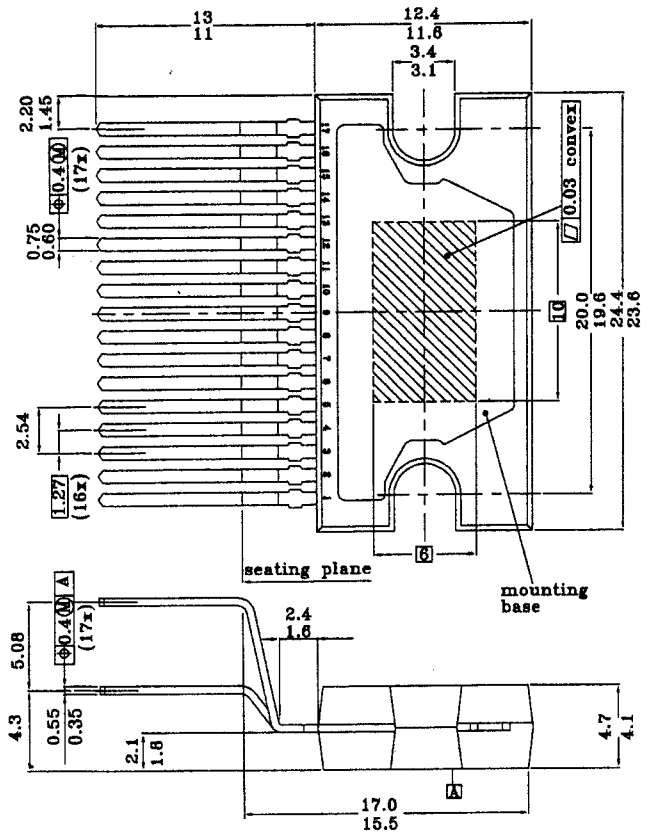


■ TDA8561Q 051-2009-00

Block Diagram

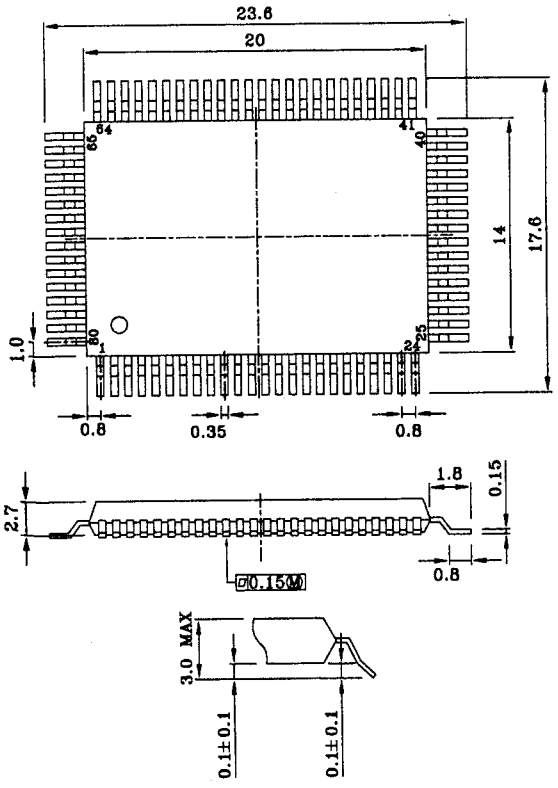


Outward Form



■ UPD75516GF-589-3B9 052-3306-10

Outward Form



Terminal Description

Pin No.	Symbol	I/O	Function
01 02	ANO AVREF	–	Connected to GND.
03 04	VDD VDD	–	Supply voltage terminal.
05	MASTER ON	0	Aterminal which output signal to Master. Active "H".
06	D OUT	0	Digital control lead terminal. Active "H".
07	NC	–	Unused.
08	MOTOR ANT.	0	Motor antenna control terminal. Active "H".
09	AMP REM.	0	AMP remote output signal to switch supply power for AMP and audio system. Active "H".
10	AMP MUTE	0	AMP mute signal output terminal. Active "H".
11	+B REM	0	+B remote signal output. Outputs signal to supply REMOTE to the power source for the set ILLUMI and external accessory. Active "H".
12	ACC CONT	0	Accessory control signal output. Outputs interrupt signals to operate microcomputer for a group of accessories controlled by C-BUS. Active "H".
13 ≀ 19	DEST INO ≀ DEST IN6	I	Initialization terminal. Switched when Destination IN0-6 ports are connected to VDD or GND.

DESTINATION IN	North America	Europe	Australia	Japan
0	GND	GND	VDD	VDD
1	GND	VDD	GND	VDD

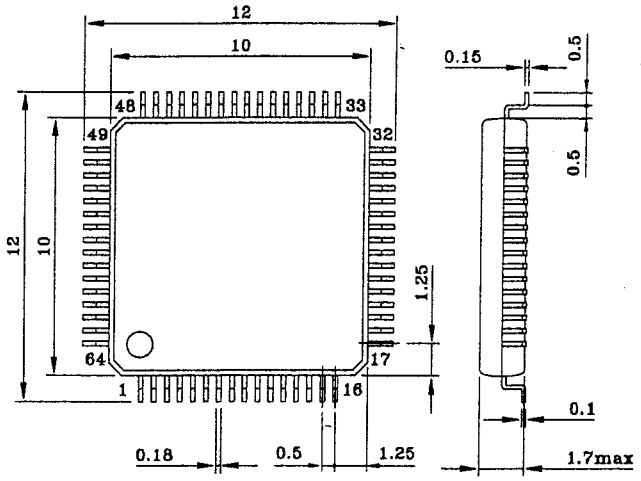
DESTINATION IN	GND	VDD
2	Without APC	With APC
3	Without Dolby	With Dolby
4	Without W ILLUME	With W ILLUMI
5	Without VF	With VF
6	With clock	Without clock

20	BEEP	0	BEEP Signal output. Terminal to output BEEP signals for emitting buzzer.
21	NC	I	Unused.
22	SK	I	SK signal input terminal. Active "H".
23	DK	I	DK signal input terminal. Active "L".
24	TUNER SD	I	A terminal which detects tuner station. With station "H".
25 26 27	LCD CE LCD CL LCD DO	0	LCD Driver control I/O terminal.
28	LCD DI	I	LCD Driver control I/O terminal.
29	LCD RES	0	LCD Driver control I/O terminal.
30	MUTE	0	System MUTE signal output terminal. Active "H".
31	NC	0	Unused.
32	NC	0	Unused.
33	GND	–	GND terminal.
34	NC	0	Unused.
35	PLL CE	0	CE(chip enable)output terminal of PLL IC.
36	PLL DO	0	Output terminal for data from PLL IC.
37	PLL SCK	0	CLK output terminal of PLL IC.

38	PLL DI	I	Input terminal for data from PLL IC.
39	ST	I	Stereo signal input terminal. When ST "L".
40	NC	I	Unused.
41	W ILLUME	0	Illume-color changeover terminal. Initialization "L".
42	NC	0	Unused.
43 44 45	VOL CE VOL DO VOL SCK	0	Serial data output terminal to control electronic.
46	RESET	I	Reset signal input terminal.
47	ACC IN	I	ACC power detect input terminal.
48	TIME BASE	I	Time base signal input. With time base for clock time counter being input, time base signal to output PLL IC is detected and clock counting starts.
49	NC	I	Unused.
50	SBI SI	I	Serial bus line I/O port.
51 52	SBI SO SBI SCK	0	Serial bus line I/O port.
53	ACC IN	I	ACC power detect input terminal. ACC ON "H".
54	GND	–	GND terminal.
55	XT1	_	Connected to GND.
56	XT2	–	Unused.
57	IC	–	Connected to GND.
58 59	X1 X2	_	System clock oscillating crystal/ceramic connecting terminal.
60	RESET	I	Reset signal input terminal.
61	T-SET	I	Tuner adjust input terminal. Adjust Mode"L".
62	FF/REW	I	FF/REW detect input terminal. FF/REW "L"
63	FWD/REV	I	FWD/REV detect input terminal. FWD "L".
64	NC	I	Unused.
65	CD/AUX	0	CD/AUX changeover output terminal. AUX "H".
66	TAPE/ TUNER	0	TAPE/TUNER changeover output terminal. TAPE "H".
67	NR ON/OFF	0	Dolby ON/OFF signal output terminal. NR ON "H".
68	NC	–	Unused.
69	MTL	0	Metal ON/OFF signal output terminal. MTL ON "H".
70	APC	0	APC ON/OFF signal output terminal.
71	MOTOR ON/OFF	0	Mechanical power ON/OFF signal output terminal. PLAY "H".
72	+5 REM	0	5V remote signal output terminal. Active "L".
73	AVSS	–	Connected to GND.
74	PACK SW	I	Cassette pack IN detect input terminal.
75	SRQ	I	SRQ signal input terminal. Input terminal for interrupt signals from slave microcomputer. Active "L".
76	NC	I	Unused.
77	SLAVE ON	I	A terminal which input signal. Active "L".
78 79 80	NC	–	Unused.

■ LC75853NW 051-6000-20

Outward Form



Terminal Description

Pin No.	Symbol	Function
01 ~ 40	S1 ~ S40	A terminal which segment signal outputs for LCD panel.
41 42 43	COM3 COM2 COM1	A terminal which common signal outputs for LCD panel.
44 45 46 ~ 49	KS1(S41) KS2(S42) KS3 ~ KS6	A terminal which key source signal outputs for key matrix.
50 ~ 54	KI1 ~ KI5	A terminal which key return signal inputs for key matrix.
55	$\overline{RES}$	A terminal which resets the IC. "L" Reset.
56	VDD	Power supply terminal (+5.5V).
57	VDD 1	A terminal which LCD segment reference Voltage.
58	VDD 2	A terminal which LCD segment reference Voltage.
59	Vss	GND terminal.
60	OSC	Oscillate system clock,38KHz (19-76KHz).
61	DO	A terminal which outputs the serial data transfer.
62	CE	A terminal which inputs the receives signal for chip enable.
63	CL	A terminal which inputs the serial data receives clock.
64	DI	A terminal which inputs the serial data receives.

Key Matrix Table

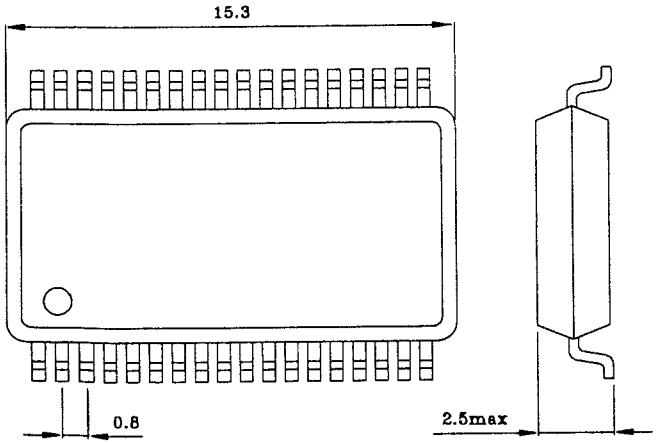
IN / OUT	KI1	KI2	KI3	KI4	KI5
KS1	M1	M2	M3	M4 B NR	M5 APC
KS2	M6 MTL	BAND	A-MODE/ LOUD	V-UP	V-DOWN
KS3	PS/AS	MUTE	A-MODE/ DX/LO	UP	DOWN
KS4	DISPLAY	VF	ILL	R-MONI	LOUD

Momeatary SW

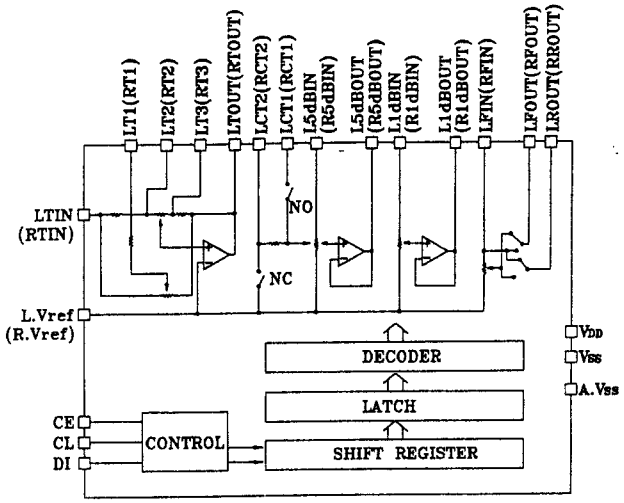
Switch Name	Function
M1 ~ M6	Preset memory wire/call switch.
PS/AS	Use PS/AS when making a preset scan or an auto store. Either of the two can be selected by the way it is pushed as fllows. Continus to push the key more than 2 seconds for "auto store memry." Push and touch off the key less then 2 seconds for "preset scan."
BAND	AM/FM/LM band selector switch. when B0,B1=0.BAND Key andup Key pressed Canbe change to "USA" BAND Key and DOWN Key pressed Canbe change to "australia Middle East" BAND.
UP DOWN	This switch is for manual tuning or SEEK tuning. UP/DOWN
T.MODE	SEEK or MANU selector switch
DISP	Display mode selector button. clock or frquncy
DOL-B (M4)	Dolby-B ON/OFF selector switch.
APC (M5)	APC ON/OFF selector switch
MTL (M6)	MTL ON/OFF selector switch
ILLUMI	ILLUMI color selector switch.
A-M/LOUD	Audio mode selector Volume → Bass → Trable → Balance → Fader ver 2 seconds, LOUNDESS ON.OFF selector
UP Button	Audio control UP Button.
DOWN Button	Audio control DOWN Button.
MUTE	Audio mute ON OFF key
VF	Europe FM Band VF ON OFF key.

■ LC7538NM 051-5000-00

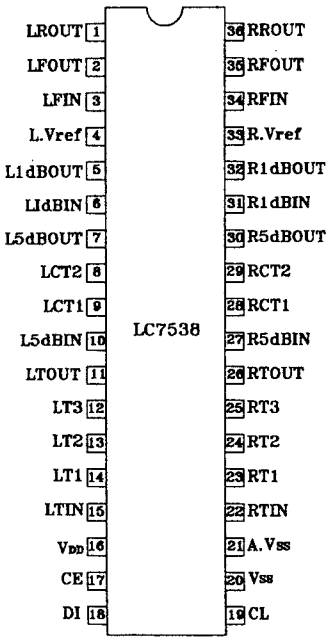
Outward Form



Block Diagram



Terminal Connection



Terminal Description

Pin No.	Symbol	Function
01	LR OUT	Left rear channel output.(FADER adjust).
02	LF OUT	Left front channel output.(FADER adjust).
03	LF IN	Left channel input.(FADER adjust).
04	L.V ref	Left channel reference voltage.
05	L1dB out	Left channel volume 1dB control output.
06	L1dB IN	Left channel volume 1dB control input.
07	L5dB OUT	Left channel volume 5dB control output.
08	LC T 2	Left channel loudness control.
09	LC T 1	Left channel loudness Hi freguncy control.
10	L5dB IN	Left channel volume 5dB control input.
11	LT OUT	Left channel Tone control output.
12 13 14	LT 3 LT 2 LT 1	Left channel BASS capacitor (LT3,LT2). Left channel TREB capacitor (LT1,LT2).
15	LT IN	A terminal which left channel signal input.
16	VDD	Power supply terminal.
17	CE	Input the receives signal for chip enable.
18	DI	Input the serial data receives.
19	CL	Input the serial data receives clock.
20	VSS	GND terminal.
21	A.VSS	GND terminal (Audio system).
22	RT IN	A terminal wgich right channel signal input.
23 24 25	RT 1 RT 2 RT 3	Right channel BASS capacitor (RT3,RT2). Right channel TREB capacitor (RT1,RT2).
26	RT OUT	Right channel Tone control output.
27	R5dB IN	Right channel volume 5dB control input.
28	RC T 1	Right channel loudness Hi freguncy control.
29	RC T 2	Right channel loudness control.
30	R5dB OUT	Right channel volume 5dB control output.
31	R1dB IN	Right channel volume 1dB control input.
32	R1dB out	Right channel volume 1dB control output.
33	R.V ref	Which right channel reference voltage.
34	RF IN	Right channel input.(FADER adjust).
35	RF OUT	Right front channel output.(FADER adjust).
36	RR OUT	Right rear channel output.(FADER adjust).

■ PARTS LIST:

• ARX3170V (PE-9953E-B)

MAIN P.W.B.:

Ref. No.	Order No.	Description	Q'ty
IC401	051-0272-00	IC LA3161	1
IC503,504	051-2009-00	IC TDA8561Q	2
IC502	051-0556-91	IC NJM2058M	1
IC201	052-3306-10	IC uPD75516GF-589-3B9	1
IC601	051-0410-05	IC TC4052BF	1
IC501	051-5000-00	IC LC7538NM	1
IC202	051-0160-01	IC HD74LS07P	1
IC602	051-0350-55	IC NJM4558M	1
IC204	051-0869-55	IC NJM2103M	1
IC801	051-1717-05	IC LC7219M	1
VR101	012-9001-06	Semi Fixed VR TB069A-0C 5KΩ	1
L501	009-9004-00	CHOKE EI=24mm	1
L201	010-9000-52	COIL 221K	1
L101	010-9005-00	COIL 30μH	1
CN101	074-1058-00	Connector CAM-A45(D41-A341)	1
CN102	076-9000-03	Connector 53014-0310 Molex	1
CN103	076-9000-04	Connector 53014-0410 Molex	1
X801	061-9002-00	X-TAL OSC 7.2MHz 20PPM	1
X201	060-1900-00	Ceramic Resonator CAS419MG 4.19MHZ	1
SW201	013-3932-01	TACT SW (RESET) SKHHLM1510-CR1	1
R520	032-0111-29	FUSE-R FRN 25S 1.8Ω JP	1
SUP101	060-0122-10	Diode DSP-201N-S00B	1
D205.505	001-0346-33	Zener Diode MTZ 5.6 JC	2
D204,208	001-0346-48	Zener Diode MTZ 9.1 JC	2
D501	001-0346-23	Zener Diode MTZ 4.3 JB	1
D504	001-0188-01	Diode 1S1885A	1
D209	001-0466-91	Diode S5688G	1
D101.102.103.104 201.202.203.206 210.502.505	001-0352-90	Diode 1SS176	11
Q503.801.802	190-1048-00	Transistor 2SA1048	3
Q102.103	192-2458-28	Transistor 2SC2458-GR	2
Q201,202,209,210	193-1858-00	Transistor 2SD1858 (TV3)	4
Q208,212,401~403	192-2458-00	Transistor 2SC2458	5
Q207	191-1243-00	Transistor 2SB1243 (TV3)	1
Q101,203,205,405 504,803	125-2003-93	Transistor RN1203	6
Q211	190-1548-00	Transistor 2SA1548	1
Q204	191-1237-00	Transistor 2SB1237	1
Q404	191-1240-00	Transistor 2SB1240	1
Q501,502	193-1450-00	Transistor 2SD1450 RST	2
Q206	102-1846-50	Transistor 2SC1846 R.S	1
R227	111-1001-98	Carbon Film-R 1/4WSS 10Ω JP	1
R220~223,225,226 229,241,234,250 421	111-1021-98	Carbon Film-R 1/4WSS 1KΩ JP	11
R203,205,208,216 230,242,245,801 802,808,111	111-1031-98	Carbon Film-R 1/4WSS 10KΩ JP	11
R412,415	111-2721-98	Carbon Film-R 1/4WSS 2.7KΩ JP	2
R237	111-2731-98	Carbon Film-R 1/4WSS 27KΩ JP	1
R502	111-3311-98	Carbon Film-R 1/4WSS 330Ω JP	1
R243	111-4711-88	Carbon Film-R 1/2WS 470Ω JP	1

Ref. No.	Order No.	Description	Q'ty
R219	111-2711-98	Carbon Film-R 1/4WSS 270Ω JP	1
R114,509,512~514	111-4721-98	Carbon Film-R 1/4WSS 4.7KΩ JP	5
R253	111-4731-98	Carbon Film-R 1/4WSS 47K JP	1
R119,239	111-1231-98	Carbon Film-R 1/4WSS 12KΩ JP	2
R803,804	111-2221-98	Carbon Film-R 1/4WSS 2.2KΩ JP	2
R251,411	111-2231-98	Carbon Film-R 1/4WSS 22KΩ JP	2
R217,218,246,247	111-1091-98	Carbon Film-R 1/4WSS 1Ω JP	4
R248	111-4711-98	Carbon Film-R 1/4WSS 470Ω JP	1
R201,206,207,209 214,215,228,240 244,257,501,503 504~506,518,519 605,606,809~812	117-1031-15	Chip-R 1/10W 10K Ω J	23
R106,254,401,402	117-4731-15	Chip-R 1/10W 47KΩ J	4
R107,108	117-1231-15	Chip-R 1/10W 12KΩ J	2
R109	117-6231-15	Chip-R 1/10W 62KΩ J	1
R116,211~213,240 805~807	117-1021-15	Chip-R 1/10W 1KΩ J	8
R104,105,210,413 414,602,606	117-1041-15	Chip-R 1/10W 100KΩ J	7
R103,233,234,249 255,407,408	117-1241-15	Chip-R 1/10W 120KΩ J	7
R610,612	117-1831-15	Chip-R 1/10W 18KΩ J	2
R102,110,113,115 409,410	117-2221-15	Chip-R 1/10W 2.2KΩ J	6
R232,258,522,601 603,607,608	117-2231-15	Chip-R 1/10W 22KΩ J	7
R515,521	117-3311-15	Chip-R 1/10W 330Ω J	2
R231,609,611	117-3321-15	Chip-R 1/10W 3.3KΩ J	3
R235,238,403,406 507,508,510,511	117-4721-15	Chip-R 1/10W 4.7KΩ J	8
R416,417,516,517	117-5621-15	Chip-R 1/10W 5.6KΩ J	4
R101,236	117-6831-15	Chip-R 1/10W 68KΩ J	2
R404,405	117-8201-15	Chip-R 1/10W 82Ω J	2
R613	117-1011-15	Chip-R 1/10W 100Ω J	1
R202	116-1031-15	Chip-R 1/8W 10KΩ J	1
C204,205,805	176-3301-50	Chip-C 50V 33PF CH TA	3
C203,216,803	176-1011-50	Chip-C 50V 100PF CH TA	3
C101,103,106,211 516,518,520,525 804	178-1022-55	Chip-C 50V 1000PF Y5P TA	9
C206,210,802,808 218	178-1035-56	Chip-C 25V 0.01μF Y5V TA	5
C104,105,503,508	178-2232-55	Chip-C 25V 0.022μF Y5P TA	4
C107,108,111,114 201,217	178-2235-56	Chip-C 25V 0.022μF Y5V TA	6
C110,409,410	178-2735-56	Chip-C 25V 0.027μF Y5V TA	3
C505,510	178-3322-55	Chip-C 50V 3300PF Y5P TA	2
C502,507	178-4722-55	Chip-C 50V 4700PF Y5P TA	2
C209	178-4735-56	Chip-C 25V 0.047μF Y5V SSA	1
C403,404	180-1053-63	Electrolytic-C 50V 1μF M RB	2
C514,517,519,521	180-2253-63	Electrolytic-C 50V 2.2μF M RB	4
C512,513,525	180-4753-63	Electrolytic-C 50V 4.7μF M RB	3
C112	181-3353-62	Electrolytic-C 50V 3.3μF M RB(LN)	1
C601,604	182-1053-63	SS Electrolytic-C 50V 1μF M RB	2
C411,524	182-1063-33	SS SSElectrolytic-C 16V 10μF M RB	2
C109,208,501,607 801	182-1073-23	SS Electrolytic-C 10V 100μF M RB	5
C113	178-1032-55	Ceramic-Chip-C 50V 0.01μF Y5P TA	1
C506,511	182-2243-63	SS Electrolytic-C 50V 0.22μF M RB	2

MAIN P.W.B.:

Ref. No.	Order No.	Description	Q'ty
C213,215,504,509 602,604,606,609	182-2253-63	SS Electrolytic-C 50V 2.2μF M RB	8
C102,212,405,406	184-1073-23	Electrolytic-C 10V 100μF M RB	4
C807	182-4743-63	SS Electrolytic-C 50V 0.47μF M RB	1
C202,207	184-2273-22	Electrolytic-C 10V 220μF M RB	2
C214	184-4763-23	Electrolytic-C 10V 47μF M RB	1
C523	042-0447-00	Electrolytic-C 16V 2200μF M (13*20*5)	1
C806	176-2201-50	Ceramic-Chip-C 50V 22PF J CH TA	1
C401,402	160-6812-75	Ceramic-C 50V 680PF K B TS	2
C522	173-1042-19	Plyester-C 50V 0.1 FμK TA	1
C407,408	173-2732-19	Plyester-C 50V 0.027μF K TA	2

SW P.W.B.:

Ref. No.	Order No.	Description	Q'ty
IC101	051-6000-20	IC LC75853NW	1
S104,105,109,110 114,115	013-3812-11	TACT SW SKQCAC 260G TA	6
S101,108,111~113 116~121	013-6002-50	TACT SW SKHVBC3430-CR TA	11
S102,103,106,107	013-3812-01	TACT SW SKHLAJ ALPS	4
PL101~103	017-9000-00	Pilot Lamp 14V 40mA D3*6.5mm	3
PL104,105	017-9001-00	Pilot Lamp 8V 68mA 0.13 CP D3*6	2
CN101	076-0481-00	Connector CAM-A44D41-A340	1
R101~104	111-2221-98	Carbon Film-R 1/4WSS 2.2KΩ J TA	4
R106	117-1031-15	Chip-R 1/10W 10KΩ J TA	1
R105	117-6831-15	Chip-R 1/10W 68KΩ J TA	1
C101	178-1822-55	Chip-C 50V 1800PF K TA	1
C102~104	178-4735-56	Chip-C 25V 0.047μF Y5V SSA	3

VF P.W.B.:

Ref. No.	Order No.	Description	Q'ty
IC301	051-1817-90	IC TDA1581T	1
L301	010-9006-00	COIL 2.56MH VF	1
VR301	012-9001-00	Semi Fixed VR TB069A-0C 300	1
C304	043-0214-00	Polyester-C PAS 332J 100	1
C309,310	043-0497-00	Plastic-Film-C 3L 2A683 J	2
R307,315	111-1041-91	Carbon Film-R 1/4WSS 100KΩ JP	2
R304,306	117-1041-15	Chip-R 1/10W 100KΩ J	2
R308	117-1051-15	Chip-R 1/10W 1MΩ J	1
R314	117-2241-15	Chip-R 1/10W 220KΩ J	1
R305	117-2731-15	Chip-R 1/10W 27KΩ J	1
R312	117-3311-15	Chip-R 1/10W 330Ω J	1
R310	117-3331-15	Chip-R 1/10W 33KΩ J	1
R311	117-4721-15	Chip-R 1/10W 4.7KΩ J	1
R309	117-6831-15	Chip-R 1/10W 68KΩ J	1
R313	117-6841-15	Chip-R 1/10W 680KΩ J	1
C303	173-4731-19	Ployester-C 50v 0.047μF J	1
C302	176-5601-50	Chip-C 50V 56PFμCH	1
C305	177-6832-55	Chip-C 25v 0.068μF Y5P	1
C311	178-2243-56	Chip-C 25V 0.22μF Y5V	1
C306	178-1832-55	Ceramic-Chip-C 25v 0.018μF Y5P	1
C308,315	178-1045-56	Chip-C 25v 0.1μF Y5V	2
C312	178-1545-56	Chip-C 25v 0.15μF Y5V	1
C307	182-4753-53	SS Electrolytic-C 35v 4.7μF M RB	1

• ARX3170E (PE-9952E-C/D)

MAIN P.W.B.:

Ref. No.	Order No.	Description	Q'ty
IC401	051-0272-00	IC LA3161	1
IC503,504	051-2009-00	IC TDA8561Q	2
IC502	051-0556-91	IC NJM2058M	1
IC201	052-3306-10	IC uPD75516GF-589-3B9	1
IC601	051-0410-05	IC TC4052BF	1
IC501	051-5000-00	IC LC7538NM	1
IC202	051-0160-01	IC HD74LS07P	1
IC602	051-0350-55	IC NJM4558M	1
IC204	051-0869-55	IC NJM2103M	1
IC801	051-1717-05	IC LC7219M	1
VR101	012-9001-06	Semi Fixed VR TB069A-0C 5KΩ	1
L501	009-9004-00	CHOKE El=24mm	1
L201	010-9000-52	COIL 221K	1
L101	010-9005-00	COIL 30μH	1
CN101	074-1058-00	Connector CAM-A45(D41-A341)	1
CN102	076-9000-03	Connector 53014-0310 Molex	1
CN103	076-9000-04	Connector 53014-0410 Molex	1
X801	061-9002-00	X-TAL OSC 7.2MHz 20PPM	1
X201	060-1900-00	Ceramic Resonator CAS419MG 4.19MHZ	1
SW201	013-3932-01	TACT SW (RESET) SKHHLM1510-CR1	1
R520	032-0111-29	FUSE-R FRN 25S 1.8Ω JP	1
SUP101	060-0122-10	Diode DSP-201N-S00B	1
D205.505	001-0346-33	Zener Diode MTZ 5.6 JC	2
D204,208	001-0346-48	Zener Diode MTZ 9.1 JC	2
D501	001-0346-23	Zener Diode MTZ 4.3 JB	1
D504	001-0188-01	Diode 1S1885A	1
D209	001-0466-91	Diode S5688G	1
D101.102.103.104 201.202.203.206 210.502.505	001-0352-90	Diode 1SS176	11
Q503.801.802	190-1048-00	Transistor 2SA1048	3
Q102.103	192-2458-28	Transistor 2SC2458-GR	2
Q201,202,209,210	193-1858-00	Transistor 2SD1858 (TV3)	4
Q208,212,401~403	192-2458-00	Transistor 2SC2458	5
Q207	191-1243-00	Transistor 2SB1243 (TV3)	1
Q101,203,205,405 504,803	125-2003-93	Transistor RN1203	6
Q211	190-1548-00	Transistor 2SA1548	1
Q204	191-1237-00	Transistor 2SB1237	1
Q404	191-1240-00	Transistor 2SB1240	1
Q501,502	193-1450-00	Transistor 2SD1450 RST	2
Q206	102-1846-50	Transistor 2SC1846 R.S	1
R227	111-1001-98	Carbon Film-R 1/4WSS 10Ω JP	1
R220~223,225,226 229,241,234,250 421	111-1021-98	Carbon Film-R 1/4WSS 1KΩ JP	11
R203,205,208,216 230,242,245,801 802,806,111	111-1031-98	Carbon Film-R 1/4WSS 10KΩ JP	11
R412,415	111-2721-98	Carbon Film-R 1/4WSS 2.7KΩ JP	2
R237	111-2731-98	Carbon Film-R 1/4WSS 27KΩ JP	1
R502	111-3311-98	Carbon Film-R 1/4WSS 330Ω JP	1
R243	111-4711-88	Carbon Film-R 1/2WS 470Ω JP	1

Ref. No.	Order No.	Description	Q'ty
R219	111-2711-98	Carbon Film-R 1/4WSS 270Ω JP	1
R114,509,512~514	111-4721-98	Carbon Film-R 1/4WSS 4.7KΩ JP	5
R253	111-4731-98	Carbon Film-R 1/4WSS 47KΩ JP	1
R119,239	111-1231-98	Carbon Film-R 1/4WSS 12KΩ JP	2
R803,804	111-2221-98	Carbon Film-R 1/4WSS 2.2KΩ JP	2
R251,411	111-2231-98	Carbon Film-R 1/4WSS 22KΩ JP	2
R217,218,246,247	111-1091-98	Carbon Film-R 1/4WSS 1Ω JP	4
R248	111-4711-98	Carbon Film-R 1/4WSS 470Ω JP	1
R201,206,207,209 214,215,228,240 244,257,501,503 504~506,518,519 605,606,809~812	117-1031-15	Chip-R 1/10W 10KΩ J	23
R106,254,401,402	117-4731-15	Chip-R 1/10W 47KΩ J	4
R107,108	117-1231-15	Chip-R 1/10W 12KΩ J	2
R109	117-6231-15	Chip-R 1/10W 62KΩ J	1
R116,211~213,240 805~807	117-1021-15	Chip-R 1/10W 1KΩ J	8
R104,105,210,413 414,602,606	117-1041-15	Chip-R 1/10W 100KΩ J	7
R103,233,234,249 255,407,408	117-1241-15	Chip-R 1/10W 120KΩ J	7
R610,612	117-1831-15	Chip-R 1/10W 18KΩ J	2
R102,110,113,115 409,410	117-2221-15	Chip-R 1/10W 2.2KΩ J	6
R232,258,522,601 603,607,608	117-2231-15	Chip-R 1/10W 22KΩ J	7
R515,521	117-3311-15	Chip-R 1/10W 330Ω J	2
R231,609,611	117-3321-15	Chip-R 1/10W 3.3KΩ J	3
R235,238,403,406 507,508,510,511	117-4721-15	Chip-R 1/10W 4.7KΩ J	8
R416,417,516,517	117-5621-15	Chip-R 1/10W 5.6KΩ J	4
R101,236	117-6831-15	Chip-R 1/10W 68KΩ J	2
R404,405	117-8201-15	Chip-R 1/10W 82Ω J	2
R613	117-1011-15	Chip-R 1/10W 100Ω J	1
R202	116-1031-15	Chip-R 1/8W 10KΩ J	1
C204,205,805	176-3301-50	Chip-C 50V 33PF CH TA	3
C203,216,803	176-1011-50	Chip-C 50V 100PF CH TA	3
C101,103,106,211 516,518,520,525 804	178-1022-55	Chip-C 50V 1000PF Y5P TA	9
C206,210,802,808 216	178-1035-56	Chip-C 25V 0.01μF Y5V TA	5
C104,105,503,508	178-2232-55	Chip-C 25V 0.022μF Y5P TA	4
C107,108,111,114 201,217	178-2235-56	Chip-C 25V 0.022μF Y5V TA	6
C110,409,410	178-2735-56	Chip-C 25V 0.027μF Y5V TA	3
C505,510	178-3322-55	Chip-C 50V 3300PF Y5P TA	2
C502,507	178-4722-55	Chip-C 50V 4700PF Y5P TA	2
C209	178-4735-56	Chip-C 25V 0.047μF Y5V SSA	1
C403,404	180-1053-63	Electrolytic-C 50V 1μF M RB	2
C514,517,519,521	180-2253-63	Electrolytic-C 50V 2.2μF M RB	4
C512,513,515	180-4753-63	Electrolytic-C 50V 4.7μF M RB	3
C112	181-3353-62	Electrolytic-C 50V 3.3μF M RB(LN)	1
C601,604	182-1053-63	SS Electrolytic-C 50V 1μF M RB	2
C411,524	182-1063-33	SS SSElectrolytic-C 16V 10μF M RB	2
C109,208,501,607 801	182-1073-23	SS Electrolytic-C 10V 100μF M RB	5
C113	178-1032-55	Ceramic-Chip-C 50V 0.01μF Y5P TA	1
C506,511	182-2243-63	SS Electrolytic-C 50V 0.22μF M RB	2

MAIN P.W.B.:

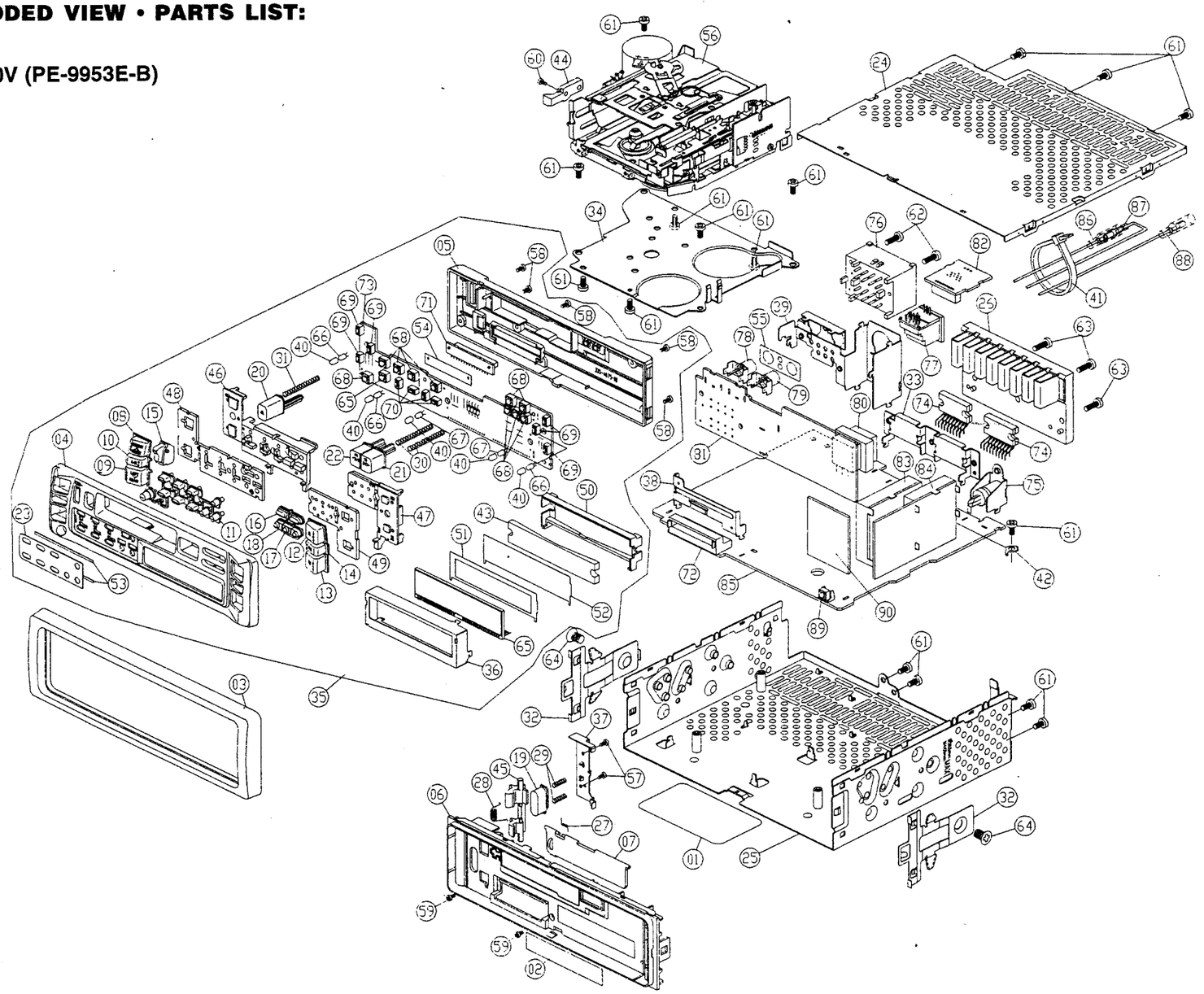
Ref. No.	Order No.	Description	Q'ty
C213,215,504,509 602,604,606,609	182-2253-63	SS Electrolytic-C 50V 2.2μF M RB	8
C102,212,405,406	184-1073-23	Electrolytic-C 10V 100μF M RB	4
C807	182-4743-63	SS Electrolytic-C 50V 0.47μF M RB	1
C202,207	184-2273-22	Electrolytic-C 10V 220μF M RB	2
C214	184-4763-23	Electrolytic-C 10V 47μF M RB	1
C523	042-0447-00	Electrolytic-C 16V 2200μF M (13*20*5)	1
C806	176-2201-50	Ceramic-Chip-C 50V 22PF J CH TA	1
C401,402	160-6812-75	Ceramic-C 50V 680PF K B TS	2
C522	173-1042-19	Plyester-C 50V 0.1μF K TA	1
C407,408	173-2732-19	Plyester-C 50V 0.027μF K TA	2

SW P.W.B.:

Ref. No.	Order No.	Description	Q'ty
IC101	051-6000-20	IC LC75853NW	1
S104,105,109,110 114,115	013-3812-11	TACT SW SKQCAC 260G TA	6
101,108,111~113 117~121	013-6002-50	TACT SW SKHVBC3430-CR TA	10
S102,103,106,107 116	013-3812-01	TACT SW SKHLAJ ALPS .	5
PL101~103	017-9000-00	Pilot Lamp 14V 40mA D3*6.5mm	3
PL104,105	017-9001-00	Pilot Lamp 8V 68mA 0.13 CP D3*6	2
CN101	076-0481-00	Connector CAM-A44D41-A340	1
R101~104	111-2221-98	Carbon Film-R 1/4WSS 2.2KΩ J TA	4
R106	117-1031-15	Chip-R 1/10W 10KΩ J TA	1
R105	117-6831-15	Chip-R 1/10W 68KΩ J TA	1
C101	178-1822-55	Chip-C 50V 1800PF K TA	1
C102~104	178-4735-56	Chip-C 25V 0.047μF Y5V SSA	3

■ EXPLODED VIEW • PARTS LIST:

• ARX3170V (PE-9953E-B)



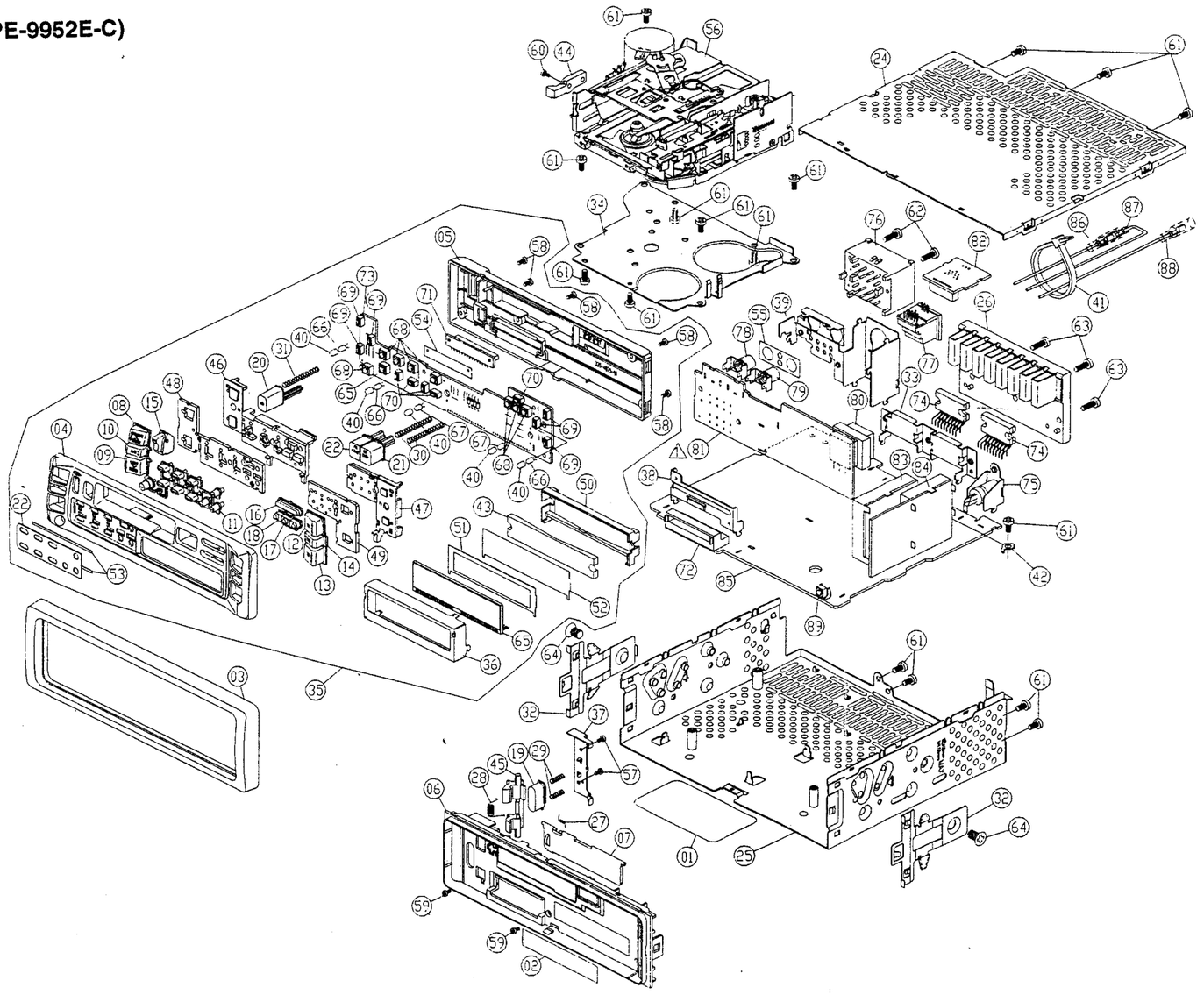
Ref. No	Order No.	Description	Q'ty
01	286-8278-00	Set Plate	1
02	291-0067-00	Sticker (SECURITY)	1
03	370-5516-00	Outer Escutcheon	1
04	370-9015-03	Escutcheon (F)	1
05	335-4875-00	Rear Cover	1
06	370-9016-00	Inner Escutcheon	1
07	320-0526-02	Dustproof Cover	1
08	382-3797-00	Button (FR)	1
09	382-3795-00	Button (LR)	1
10	382-3796-00	Button (AM)	1
11	382-3796-00	Button (Ass'y)	1
12	382-3789-00	Button (UP)	1

Ref. No	Order No.	Description	Q'ty
13	382-3791-00	Button (DOWN)	1
14	382-3790-00	Button (TM)	1
15	382-3798-00	Button (RELEASE)	1
16	382-3793-00	Button (MUTE/DISP)	1
17	382-7701-00	Button (RPT)	1
18	382-7702-00	Button (SCN/RDM)	1
19	382-7681-00	Button (PUSH-OUT)	1
20	382-7697-00	Button (EJE)	1
21	382-7699-00	Button (FF)	1
22	382-7700-00	Button (REW)	1
23	378-0131-00	Badge	1
24	310-1571-00	Upper case	1

Ref. No	Order No.	Description	Q'ty
25	311-1640-02	Lower Case	1
26	313-1616-00	Heat Sink	1
27	750-3169-00	Spring (DOOR)	1
28	750-3170-00	Spring (HOOK)	1
29	750-3167-00	Spring (PUSH-OUT)	2
30	750-3138-00	Spring (FF/REW)	2
31	750-3171-00	Spring (EJE)	1
32	750-3137-00	Spring	2
33	331-0613-00	IC Holder	1
34	331-0604-00	Mecha. Bracket (TOM-2)	1
35	45-9953-AA	DCP Ass'y	1
36	331-0608-00	LCD Holder	1

Ref. No	Order No.	Description	Q'ty
37	331-0615-00	Hook Holder	1
38	331-0605-00	DCP Connector Holder	1
39	331-0610-00	Connector Holder (ISO)	1
40	345-4441-65	Lamp Cap (A)	5
41	335-0833-01	Lead Holder	1
42	331-0643-00	Earth Plate	1
43	335-4881-00	LCD Illumination Plate	1
44	335-4877-00	Spacer (EJE)	1
45	335-4876-00	Hook	1
46	335-4879-00	Illumination Plate (L)	1
47	335-4880-00	Illumination Plate (R)	1
48	345-7639-00	Sponge (L)	1
49	345-7640-00	Sponge (R)	1
50	335-4887-00	LCD Illumination Holder	1
51	347-5103-00	Film (LCD) (BLACK)	1
52	347-5102-00	Film (LCD)	1
53	347-5104-00	Double Face	2
54	347-5101-00	Film (DCP CONN.)	1
55	347-5100-00	Spacer (RCA)	1
56	930-0723-80	Tape Mechanism	1
57	702-2005-80	TAP Screw	2
58	702-2008-19	TAP Screw	5
59	714-2006-89	Machine Screw	2
60	714-2604-80	Machine Screw	1
61	714-3005-80	Machine Screw	16
62	714-2610-10	Machine Screw	2
63	714-3010-80	Machine Screw	3
64	714-5008-40	Machine Screw	2
65	379-9002-00	LCD (NEGATIVE)	1
66	017-9000-00	Pilot Lamp (14V)	3
67	017-9001-00	Pilot Lamp (8V)	2
68	013-6002-50	Tact Swith	11
69	013-3812-11	Tact Swith	6
70	013-3812-01	Tact Swith	4
71	076-0481-00	DCP Connector (M)	1
72	074-1058-00	DCP Connector (F)	1
73	039-0424-00	Swith P.W.B.	1
74	051-2009-00	Power IC	2
75	092-9000-01	ANT. Recert	1
76	074-1078-10	Connector (ISO)	1
77	074-1022-01	Connector (13 PIN)	1
78	075-9004-00	RCA Jack (RED)	1
79	075-9003-00	RCA Jack (WHITE)	1
80	009-9000-00	Chock	1
81	039-0421-00	P.W.B. (ISO)	1
82	039-0428-00	P.W.B. (13P)	1
83	80-1603-AI	Tuner (AM)	1
84	80-1752-CI	Tuner (FM)	1
85	53-9953-AQ	Main P.W.B.	1
86	850-6661-00	A-lead (YELLOW)	1
87	850-6663-00	A-lead (YELLOW/RED)	1
88	850-6662-00	A-lead (RED)	1
89	013-3932-01	Tact Swith (RESET)	1
90	54-9947-AH	VF PWB	1

• **ARX3170E (PE-9952E-C)**



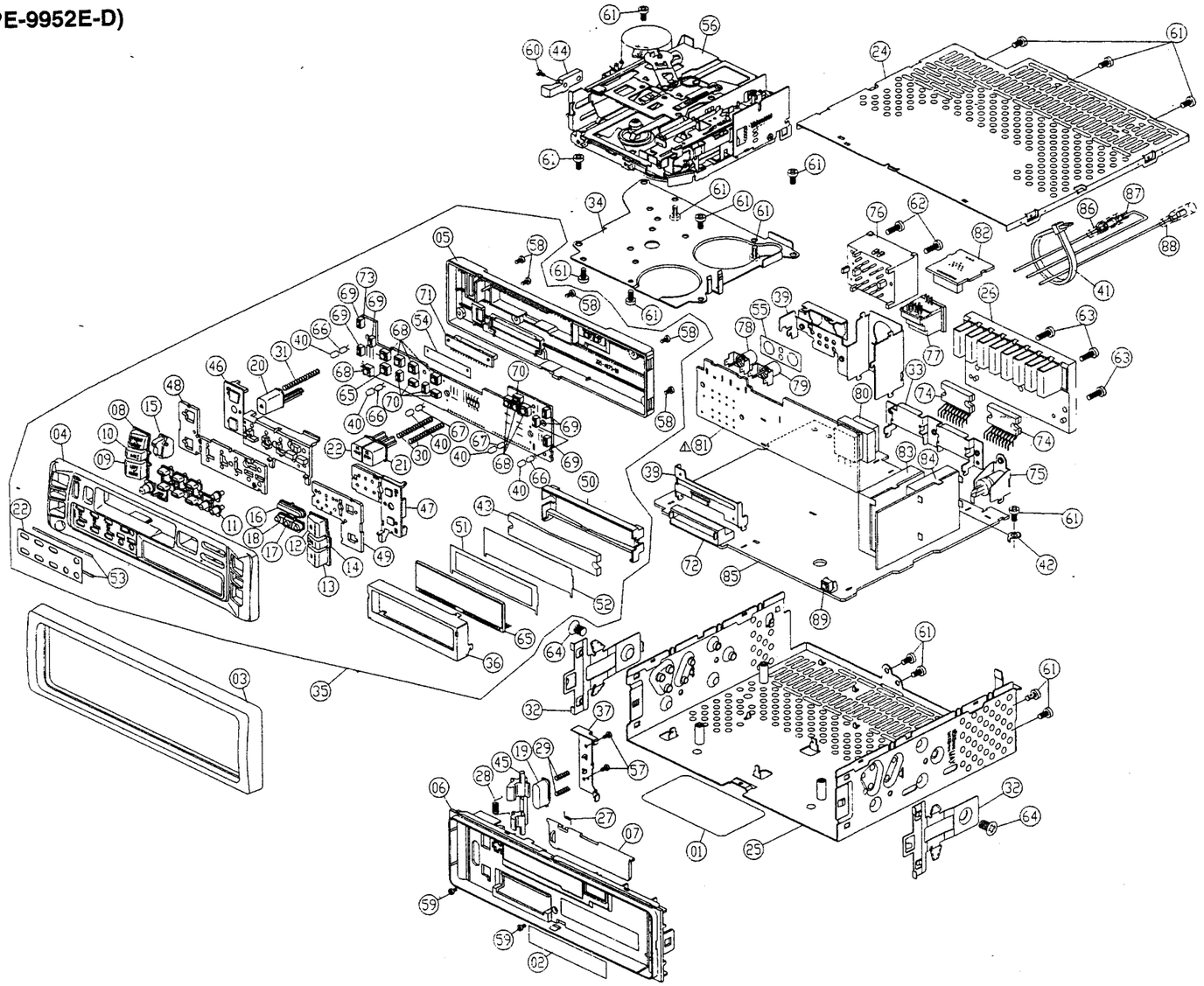
Ref. No	Order No.	Description	Q'ty
01	286-8277-00	Set Plate	1
02	291-0067-00	Sticker (SECURITY)	1
03	370-5516-00	Outer Escutcheon	1
04	370-9015-04	Escutcheon (F)	1
05	335-4875-00	Rear Cover	1
06	370-9016-00	Inner Escutcheon	1
07	320-0526-02	Dustproof Cover	1
08	382-3797-00	Button (FR)	1
09	382-3795-00	Button (LR)	1
10	382-3796-00	Button (AM)	1
11	382-7696-00	Button (Ass'y)	1
12	382-3789-00	Button (UP)	1

Ref. No	Order No.	Description	Q'ty
13	382-3791-00	Button (DOWN)	1
14	382-3790-00	Button (TM)	1
15	382-3798-00	Button (RELEASE)	1
16	382-7695-00	Button (MUTE)	1
17	382-7701-00	Button (RPT)	1
18	382-7702-00	Button (SCN/RDM)	1
19	382-7681-00	Button (PUSH-OUT)	1
20	382-7697-00	Button (EJE)	1
21	382-7699-00	Button (FF)	1
22	382-7700-00	Button (REW)	1
23	378-0131-00	Badge	1
24	310-1571-00	Upper Case	1

Ref. No	Order No.	Description	Q'ty
25	311-1640-02	Lower Case	1
26	313-1616-00	Heat Sink	1
27	750-3169-00	Spring (DOOR)	1
28	750-3170-00	Spring (HOOK)	1
29	750-3167-00	Spring (PUSH-OUT)	2
30	750-3138-00	Spring (FF/REEW)	2
31	750-3171-00	Spring (EJE)	1
32	750-3137-00	Spring	2
33	331-0613-00	IC Holder	1
34	331-0604-00	Mecha. Bracket (TOM-2)	1
35	45-9952-AA	DCP Ass'y	1
36	331-0608-00	LCD Holder	1

Ref. No	Order No.	Description	Q'ty
37	331-0615-00	Hook Holder	1
38	331-0605-00	DCP Connector Holder	1
39	331-0610-00	Connector Holder (ISO)	1
40	345-4441-65	Lamp Cap (A)	5
41	335-0833-01	Lead Holder	1
42	331-0643-00	Earth Plate	1
43	335-4881-00	LCD Illumination Plate	1
44	335-4877-00	Spacer (EJE)	1
45	335-4876-00	Hook	1
46	335-4879-00	Illumination Plate (L)	1
47	335-4880-00	Illumination Plate (R)	1
48	345-7639-00	Sponge (L)	1
49	345-7640-00	Sponge (R)	1
50	335-4887-00	LCD Illumination Holder	1
51	347-5103-00	Film (LCD) (BLACK)	1
52	347-5102-00	Film (LCD)	1
53	347-5104-00	Double Face	2
54	347-5101-00	Film (DCP CONN.)	1
55	347-5100-00	Spacer (RCA)	1
56	930-0723-80	Tape Mechanism	1
57	702-2005-80	TAP Screw	2
58	702-2008-19	TAP Screw	5
59	714-2006-89	Machine Screw	2
60	714-2604-80	Machine Screw	1
61	714-3005-80	Machine Screw	16
62	714-2610-10	Machine Screw	2
63	714-3010-80	Machine Screw	3
64	714-5008-40	Machine Screw	2
65	379-9002-00	LCD (NEGATIVE)	1
66	017-9000-00	Pilot Lamp (14V)	3
67	017-9001-00	Pilot Lamp (8V)	2
68	013-6002-50	Tact Swith	9
69	013-3812-11	Tact Swith	6
70	013-3812-01	Tact Swith	5
71	076-0481-00	DCP Connector (M)	1
72	074-1058-00	DCP Connector (F)	1
73	039-0424-00	Swith P.W.B	1
74	051-2009-00	Power IC	2
75	092-9000-01	ANT. Recert	1
76	074-1078-10	Connector (ISO)	1
77	074-1022-01	Connector (13 PIN)	1
78	075-9004-00	RCA Jack (RED)	1
79	075-9003-00	RCA Jack (WHITE)	1
80	009-9000-00	Chock	1
81	039-0421-00	P.W.B. (ISO)	1
82	039-0428-00	P.W.B. (13P)	1
83	80-1603-AI	Tuner (AM)	1
84	80-1752-CI	Tuner (FM)	1
85	53-9952-AQ	Main P.W.B	1
86	850-6661-00	A-lead (YELLOW)	1
87	850-6663-00	A-lead (YELLOW/RED)	1
88	850-6662-00	A-lead (RED)	1
89	013-3932-01	Tact Swith (RESET)	1

• **ARX3170E (PE-9952E-D)**



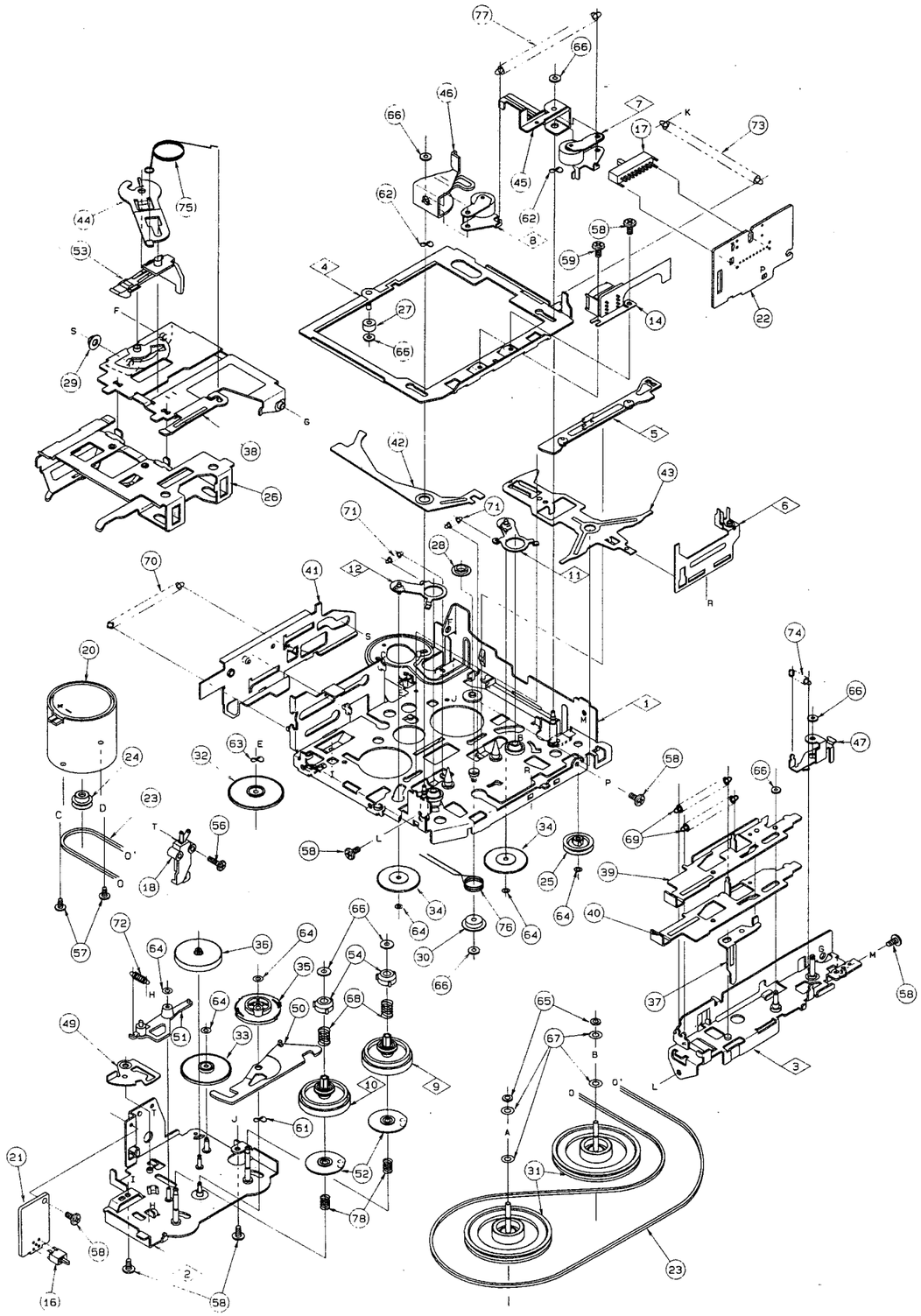
Ref. No	Order No.	Description	Q'ty
01	286-8277-00	Set Plate	1
02	291-0067-00	Sticker (SECURITY)	1
03	370-5516-00	Outer Escutcheon	1
04	370-9015-04	Escutcheon (F)	1
05	335-4875-00	Rear Cover	1
06	370-9016-00	Inner Escutcheon	1
07	320-0526-02	Dustproof Cover	1
08	382-3797-00	Button (FR)	1
09	382-3795-00	Button (LR)	1
10	382-3796-00	Button (AM)	1
11	382-7696-00	Button (Ass'y)	1
12	382-3789-00	Button (UP)	1

Ref. No	Order No.	Description	Q'ty
13	382-3791-00	Button (DOWN)	1
14	382-3790-00	Button (TM)	1
15	382-3798-00	Button (RELEASE)	1
16	382-7695-00	Button (MUTE)	1
17	382-7701-00	Button (RPT)	1
18	382-7702-00	Button (SCN/RDM)	1
19	382-7681-00	Button (PUSH-OUT)	1
20	382-7697-00	Button (EJE)	1
21	382-7699-00	Button (FF)	1
22	382-7700-00	Button (REW)	1
23	378-0131-00	Badge	1
24	310-1571-00	Upper Case	1

Ref. No	Order No.	Description	Q'ty
25	311-1640-02	Lower Case	1
26	313-1616-00	Heat Sink	1
27	750-3169-00	Spring (DOOR)	1
28	750-3170-00	Spring (HOOK)	1
29	750-3167-00	Spring (PUSH-OUT)	2
30	750-3138-00	Spring (FF/REW)	2
31	750-3171-00	Spring (EJE)	1
32	750-3137-00	Spring	2
33	331-0613-00	IC Holder	1
34	331-0604-00	Mecha. Bracket (TOM-2)	1
35	45-9952-BA	DCP Ass'y	1
36	331-0608-00	LCD Holder	1

Ref. No	Order No.	Description	Q'ty
37	331-0615-00	Hook Holder	1
38	331-0605-00	DCP Connector Holder	1
39	331-0610-00	Connector Holder (ISO)	1
40	345-4441-55	Lamp Cap (G)	5
41	335-0833-01	Lead Holder	1
42	331-0643-00	Earth Plate	1
43	335-4881-00	LCD Illumination Plate	1
44	335-4877-00	Spacer (EJE)	1
45	335-4876-00	Hook	1
46	335-4879-00	Illumination Plate (L)	1
47	335-4880-00	Illumination Plate (R)	1
48	345-7639-00	Sponge (L)	1
49	345-7640-00	Sponge (R)	1
50	335-4887-00	LCD Illumination Holder	1
51	347-5103-00	Film (LCD) (BLACK)	1
52	347-5102-00	Film (LCD)	1
53	347-5104-00	Double Face	2
54	347-5101-00	Film (DCP CONN.)	1
55	347-5100-00	Spacer (RCA)	1
56	930-0723-80	Tape Mechanism	1
57	702-2005-80	TAP Screw	2
58	702-2008-19	TAP Screw	5
59	714-2006-89	Machine Screw	2
60	714-2604-80	Machine Screw	1
61	714-3005-80	Machine Screw	16
62	714-2610-10	Machine Screw	2
63	714-3010-80	Machine Screw	3
64	714-5008-40	Machine Screw	2
65	379-9002-00	LCD (NEGATIVE)	1
66	017-9000-00	Pilot Lamp (14V)	3
67	017-9001-00	Pilot Lamp (8V)	2
68	013-6002-50	Tact Swith	9
69	013-3812-11	Tact Swith	6
70	013-3812-01	Tact Swith	5
71	076-0481-00	DCP Connector (M)	1
72	074-1058-00	DCP Connector (F)	1
73	039-0424-00	Swith P.W.B	1
74	051-2009-00	Power IC	2
75	092-9000-01	ANT. Recert	1
76	074-1078-10	Connector (ISO)	1
77	074-1022-01	Connector (13 PIN)	1
78	075-9004-00	RCA Jack (RED)	1
79	075-9003-00	RCA Jack (WHITE)	1
80	009-9000-00	Chock	1
81	039-0421-00	P.W.B. (ISO)	1
82	039-0428-00	P.W.B. (13P)	1
83	80-1603-AI	Tuner (AM)	1
84	80-1752-CI	Tuner (FM)	1
85	53-9952-AQ	Main P.W.B	1
86	850-6661-00	A-lead (YELLOW)	1
87	850-6663-00	A-lead (YELLOW/RED)	1
88	850-6662-00	A-lead (RED)	1
89	013-3932-01	Tact Swith (RESET)	1

■ EXPLODED VIEW • PARTS LIST:



• Tape mechanism section

930-0723-80

Ref. No	Order No.	Description	Q'ty
01	960-4180-05	Deck-Assy	1
02	960-4181-06	Bottom-Assy	1
03	960-4182-03	Frame-Assy	1
04	960-4184-03	Head-Assy	1
05	960-4186-02	FF-Rew-P-Assy	
06	960-4187-01	Head-SW-Assy	1
07	960-4188-03	Roller-Assy F	1
08	960-4189-03	Roller-Assy R	1
09	960-4190-07	Reel-Assy F	1
10	960-4191-07	Reel-Assy R	1
11	960-4192-02	Idler-Assy F	1
12	960-4193-02	Idler-Assy R	1
13	– –		
14	011-0320-00 011-0305-03	Head	1
15	– –		
16	013-3906-00	Switch	1
17	013-3922-00	Switch	1
18	013-3924-00	Switch	1
19	– –		
20	020-0402-00	Dc Motor	1
21	099-9126-00	PWB	1
22	099-9669-00	PWB	1
23	602-0115-00	Belt	1
24	603-0112-01	Motor Pulley	1
25	604-0042-01	Tension Pulley	1
26	606-0100-05	Pack Guide	1
27	610-0333-01	Head Roller A	1
28	610-0334-01	Head Roller B	1
29	610-0335-02	Eject Roller	1
30	610-0336-01	SP Roller	1
31	611-0090-03	Flywheel	2
32	613-0272-10	Gear A	1
33	613-0273-02	Gear B	1
34	613-0274-02	Idler Gear	2
35	613-0275-03	Change Gear	1
36	613-0277-02	Check Gear	1
37	630-2488-02	Select Plate	1
38	630-2494-07	Guide Arm	1
39	630-2715-00	FF Lever-DCP	1
40	630-2516-00	Rew Lever-DCP	1
41	630-2498-10	Eject Lever-C	1
42	630-2499-01	Change Lever	1
43	630-2501-02	Change Plate	1
44	630-2502-05	Swing Arm	1
45	630-2505-02	FF-Rew Link	1
46	630-2506-04	Reliese Link	1
47	630-2507-04	Lock Link	1
48	– –		
49	630-2529-01	Mute Plate	1
50	631-1958-05	Check Link	1
51	631-1959-01	Change Link	1
52	631-1961-03	Check Plate	2
53	631-1963-04	Pack Stopper	1

Ref. No	Order No.	Description	Q'ty
54	631-1967-00	Slide Bush	2
55	– –		
56	714-2008-81	Machine Screw	1
57	716-0484-02	Special Screw	2
58	716-1471-00	S-Tyte 2-3	7
59	716-1473-01	Head Screw	1
60	– –		
61	745-0752-00	Plate Spring	1
62	745-0756-00	Spring Washer	2
63	746-0712-03	Special Washer	1
64	746-0724-00	Special Washer	6
65	746-0869-00	Special Washer	2
66	746-0768-00	Special Washer	8
67	746-0839-00	Capstain Washer	4
68	750-2564-01	Slide Spring	2
69	750-2904-02	FF-Rew Spring	2
70	750-2905-02	Eject Spring	1
71	750-2906-00	Idler Spring	2
72	750-2907-03	Change-L-Spring	1
73	750-2908-02	Head Spring	1
74	750-2909-04	Lock Spring	1
75	750-2910-03	Slot Spring	1
76	750-2911-01	Holding Spring	1
77	750-2912-01	Pintch Spring	1
78	750-2919-03	Check Spring-R	2
79	– –		
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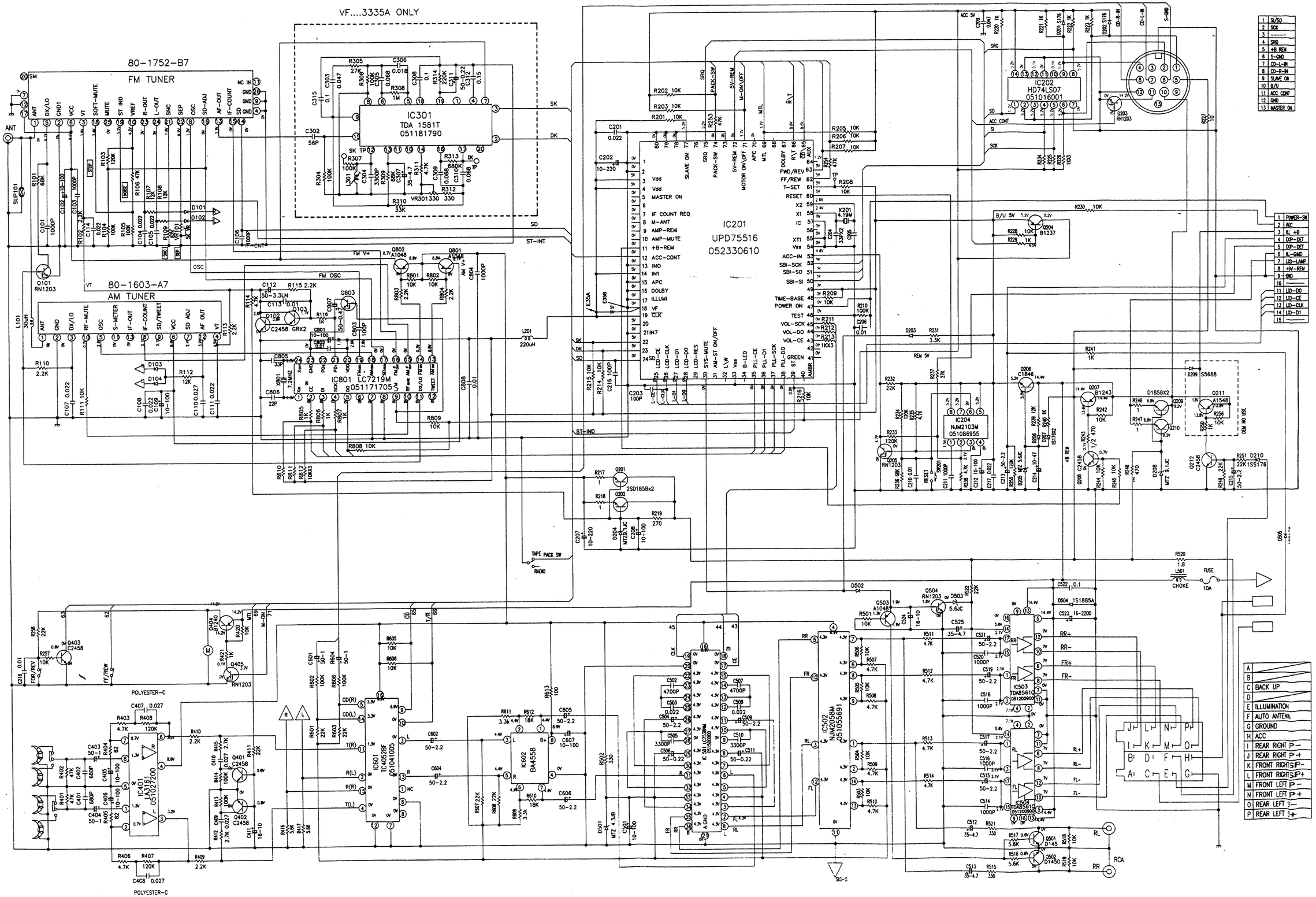
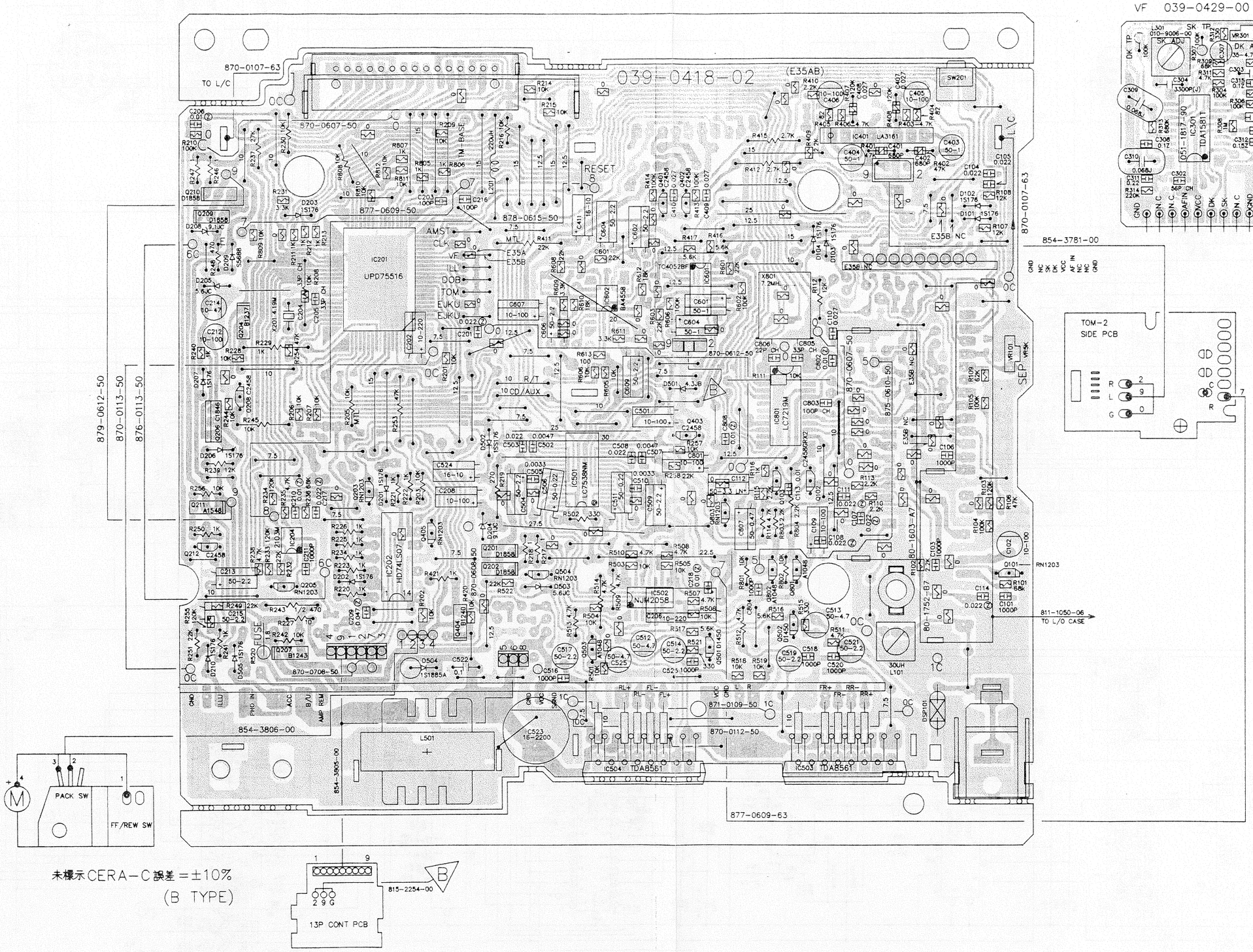
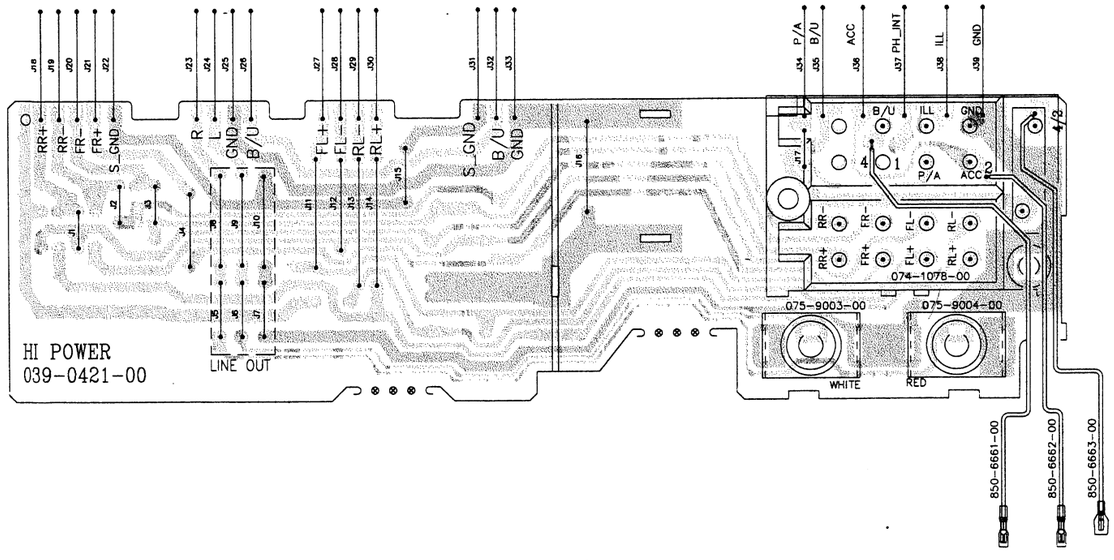
■ CIRCUIT DIAGRAM:

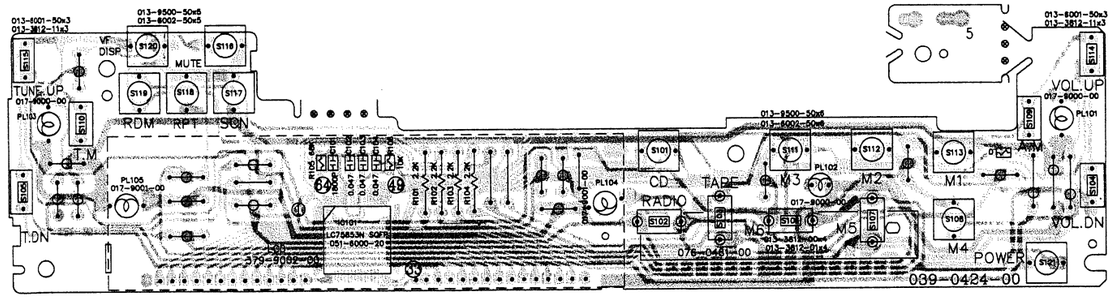


■ PRINTED WIRING BOARD:

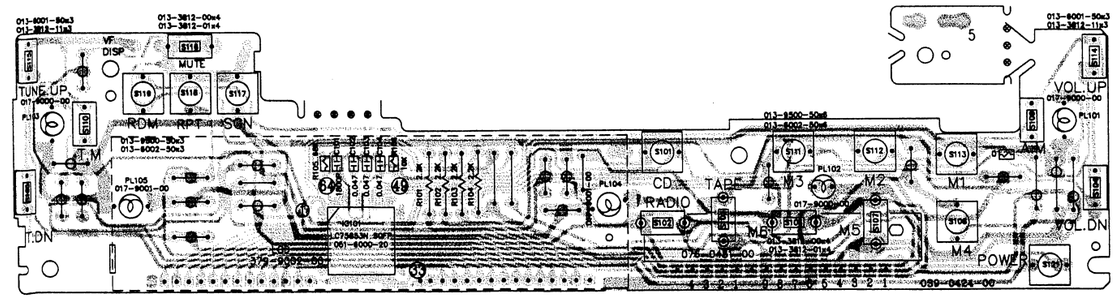


■ PRINTED WIRING BOARD:



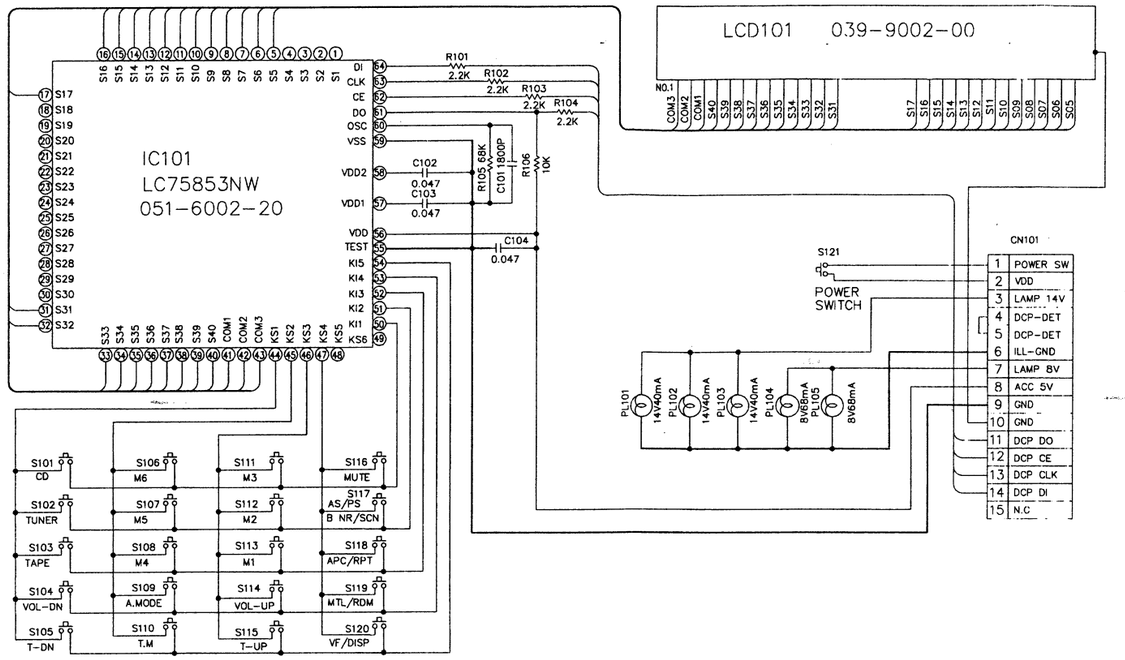


• ARX3170E (PE-9952E-C/D)



■ CIRCUIT DIAGRAM:

• ARX3170V (PE-9953E-B)



• ARX3170E (PE-9952E-C/D)